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SOME VITAL STATISTICS OF CHILDREN OF SCHOOL AGE

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The present discussion is practically limited to observations on the mortality statistics of children of school age as returned by the Division of Vital Statistics of the Bureau of the Census for the calendar year 1911. The term "children of school age" is, of necessity, limited to ages five to nineteen, inclusive, since the census returns do not give the data by causes and single years of life, but only by the two divisional periods, five to nine and ten to nineteen years. The mortality returns also cannot, at the present time, be scientifically correlated to the population of corresponding ages, since the required information for the registration area has not as yet been made public by the Census Office. For the present purpose, however, this limitation is not of material importance. The following table will emphasize the practical importance of the present discussion, which affects the health and longevity of nearly thirty million children and young persons of school age.

According to this table the population of the United States, ages five to nineteen, in the year 1910 was 27,931,375. Making allowance for the increase in population during the intervening period, the number of children and young persons of school age within the previous definition of the term may be conservatively estimated at 30,000,000 for the middle of the year 1913.

Of the population of school age a considerable proportion of both children and young persons are not at school, and a fair proportion are still within the illiterate class, which, however, is gradually diminishing throughout the United States. The percentage of children not at school of the age period five to six is quite large, and an equally large proportion of young persons of ages fifteen to nineteen are not at school for economic, physical,

TABLE I
POPULATION OF THE UNITED STATES, AGES FIVE TO NINETEEN YEARS, CENSUS OF 1910

Ages	Males	Females	Total
5-9.....	4,924,123	4,836,509	9,760,632
10-14.....	4,601,753	4,505,387	9,107,140
15-19.....	4,527,282	4,530,321	9,063,603
5-19.....	14,053,158	13,878,217	27,931,375

or other reasons. The census of 1910 fortunately gives the returns of the persons actually enrolled in the schools of the United States during the year 1909-10, being apparently an adaptation of the statistics annually collected by the Bureau of Education. According to these returns the number of children and young persons at school during the year 1909-10 was 18,009,891. Making allowance for the increase in the population of school age during the intervening period, it is safe to assume that for the year 1913 the school enrolment was about 20,000,000. The explanatory note in the census report with reference to the foregoing statement reads as follows:

It is not to be understood that all of these persons were in school on April 15, or that they were simultaneously attending school at any time during the period. They represent the whole number who had any relation as pupils to the schools of the country during this time, and may, for brevity, be designated as persons attending school in 1909-10. Though the period falls from two to two and a half months short of the entire school year 1909-10, the number of persons who enter school in April, May, and June of any school year who have not been at school earlier in the year is an insignificant part of the whole enrolment. Hence the period covered by the census enumeration can be regarded as practically identical with the school year.

In more detail, the school enrolment, with reference to the corresponding population of school age, is set forth in the following table, also derived from the final census report for 1910:

TABLE II
POPULATION OF SCHOOL AGE AND SCHOOL ENROLMENT, 1909-10

AGE PERIOD	POPULATION, 1910	PERSONS ATTENDING SCHOOL, 1909-10	
		Number	Percentage
Total.....	91,972,266	18,009,891	19.6
Under 6 years.....	12,666,762	306,431	3.1
6 to 20 years.....	27,750,599	17,300,204	62.3
6 to 9 years.....	7,725,234	5,678,320	73.5
10 to 14 years.....	9,107,140	8,028,662	88.2
15 to 20 years.....	10,918,225	3,593,222	32.9
15 to 17 years.....	5,372,176	3,748,386	51.2
18 to 20 years.....	5,546,049	844,836	15.2
21 years and over.....	51,554,905	313,256	0.6

In Table II the facts are unfortunately not given by single years of life, which would be desirable for the purpose of showing precisely the number of persons at school or enrolled for school purposes during each year of the educational period, five to nineteen years, inclusive. The table, however, is fully sufficient for the present purpose to emphasize the fact that out of approximately 30,000,000 persons of school age, five to nineteen years, inclusive, 62 per cent, or from about 18,000,000 to 20,000,000, are actually at school and, therefore, subject to the physical, mental, and moral strain of school life.

The mortality returns of the United States are limited to the so-called registration area, which includes the states and cities for which the death certificates are accepted by the Division of Vital Statistics of the Census Office. The population of this area in 1911 was 59,275,000, equivalent to 63.1 per cent of the total population of the continental United States. The actual area of the so-called registration states for 1911 represented, however, only 37.2 per cent of the total land area of the United States, so that for a considerable section, chiefly rural, of course, we at

present have no trustworthy and absolutely conclusive information regarding the local death-rate from all causes and from particular causes in detail. It is, therefore, undoubtedly somewhat hazardous in statistical practice to accept the returns for the registration area as conclusive for the country at large but for the time being there is no alternative. It is safe, however, to assume that in any event the conclusions are not likely to be seriously in error with respect to the principal causes of death, and that the margin of doubt affects chiefly the less important causes, or such, for illustration, as are limited to less than 1,000 deaths per annum in the registration area. It has seemed advisable, however, for the present purpose, to estimate the probable mortality for the country at large, and, subject to the foregoing words of caution, the conclusions may be accepted with confidence as being approximately correct.

The total number of deaths in the registration area during the year 1911 was 839,284. For ages five to nineteen, inclusive, this mortality was distributed as follows:

TABLE III
MORTALITY, AGES FIVE TO NINETEEN
(U.S. Registration Area, 1911)

Ages	Reg. Area No. Deaths	Percentage	Estimate for the Continental United States
5-9.....	18,112	35.1	28,749
	12,337	23.9	19,583
	21,154	41.0	33,577
	51,603	100.0	81,909
5-19.....	51,603	6.1	81,909
All other ages.....	787,681	93.9	1,250,288
All ages.....	839,284	100.0	1,332,197

It is shown by Table III that during the year 1911 there were in the registration area 51,603 deaths at ages five to nineteen, of which 35.1 per cent occurred at ages five to nine, 23.9 per cent at ages ten to fourteen, and 41.0 per cent at ages fifteen to nineteen. Of the mortality at all ages 6.1 per cent occurred at the age period

five to nineteen years, inclusive. When these statistics are applied to the total population of the United States as estimated by the Census Office for the year 1911 at 93,927,000, it is shown that the probable total number of deaths, ages five to nineteen, in the entire continental United States during that year was 81,909, of which 28,749 were deaths at ages five to nine, 19,583 at ages ten to fourteen, and 33,577 at ages fifteen to nineteen.

Before proceeding to a discussion in detail of the causes of death at ages five to nineteen, and their relation to modern methods of prevention and sanitary control, the following table of comparative death-rates is included for the purpose of convenient reference and comparison:

TABLE IV
COMPARATIVE MORTALITY RATES, BY DIVISIONAL PERIODS OF LIFE
(United States Registration Area, 1900-1911)
Rate per 1,000 of Population

	MALES		FEMALES	
	1900	1911	1900	1911
Under 1 year.....	178.4	138.6	145.0	112.1
1 to 4 years.....	20.4	13.3	19.1	12.2
Under 5 years.....	54.1	39.8	45.7	33.3
5 to 9 years.....	4.7	3.4	4.6	3.1
10 to 14 years.....	2.9	2.4	3.1	2.1
15 to 19 years.....	4.9	3.7	4.8	3.3
20 to 24 years.....	7.0	5.3	6.7	4.7
25 to 34 years.....	8.3	6.7	8.2	6.0
35 to 44 years.....	10.8	10.4	9.8	8.3
45 to 54 years.....	15.8	16.1	14.2	12.9
55 to 64 years.....	28.8	30.9	25.8	26.0
65 to 74 years.....	59.5	61.6	53.7	55.1
75 years and over.....	145.9	147.4	139.3	139.2

Limiting the analysis of this table to the three divisional periods of life within the scope of the present discussion, it appears that at ages five to nine the male death-rate has decreased during the intervening decennium from 4.7 per 1,000 of population to 3.4. The death-rate at ages ten to fourteen years decreased from 2.9 to 2.4; but at ages fifteen to nineteen there was a decline from 4.9 to 3.7. The corresponding decreases in the female death-rate were as follows: at ages five to nine the death-rate declined from

4.6 to 3.1 per 1,000; at ages ten to fourteen, from 3.1 to 2.1; and at ages fifteen to nineteen, from 4.8 to 3.3. In other words, the death-rates of 1911 as compared with 1900 were, for males, 72 per cent at ages five to nine, 83 per cent at ages ten to fourteen, and 76 per cent at ages fifteen to nineteen; and for females, 67 per cent at ages five to nine, 68 per cent at ages ten to fourteen, and 69 per cent at ages fifteen to nineteen. It is therefore shown that there was a larger relative decline in the mortality of females than of males, and that the least decline occurred for males at ages ten to fourteen, when, however, the actually attained death-rates are relatively very low. The table is of interest in further emphasizing the well-known fact that commendable progress has been made in the public health of the United States during the past decade, and that this improvement has been of no inconsiderable advantage to the population of school age, or from five to nineteen years, inclusive.

It would obviously be impossible in a discussion of this kind to include all of the numerous causes of death which affect the population at ages five to nineteen. I have therefore limited the discussion to thirty-seven principal causes, represented by at least 250 deaths in the registration area during the year 1911. These thirty-seven causes are represented by 46,524 deaths out of a total of 51,603 deaths from all causes. At ages five to nine the thirty-seven causes are represented by 16,236 deaths, or 89.6 per cent of the 18,112 deaths from all causes at this period of life. At ages ten to nineteen the thirty-seven causes are represented by 30,288 deaths, or 90.4 per cent of the 33,491 deaths from all causes at this period of life. The details are presented in tabular form in Appendix A.

I am not aware of any similar analysis having heretofore been made of the mortality of the age period five to nineteen years by the principal causes of death. Some of the results set forth are certainly suggestive of a very considerable possibility of a further and material reduction in the mortality of child life and the early period of adolescence. According to the table the leading cause of death at ages five to nineteen was tuberculosis of the lungs, represented by 7,394 deaths, or 14.3 per cent of the mortality from

all causes at this period of life; the next most important cause of death was accidents, represented by 7,142 deaths, or 13.8 per cent of the mortality from all causes at ages five to nineteen; the third leading cause was diphtheria and croup, represented by 3,661 deaths; followed by typhoid fever, with 3,298 deaths; organic diseases of the heart, with 3,021 deaths; and appendicitis and typhlitis, with 2,119 deaths. In other words, the causes of death during the period of school life are, in the order of their importance, according to American experience: (1) tuberculosis of the lungs, (2) accidents, (3) diphtheria and croup, (4) typhoid fever, and (5) organic diseases of the heart. These five causes account for 24,516 deaths out of a total of 51,603 deaths from all causes at ages five to nineteen, or 47.5 per cent. With the exception of organic diseases of the heart, of which, however, also a fair proportion are within the preventable class, the other four causes are largely preventable and within the scope of federal and state control in matters of public health. The larger significance of these conclusions, however, is brought out by the table in Appendix B, in which the mortality by thirty-seven specified causes has been estimated for the entire continental United States separately for each of the two periods, five to nine years and ten to nineteen years, and in the aggregate for the period five to nineteen years considered as a group. On the basis of this estimate it appears that during 1911 there were approximately 81,909 deaths from all causes among persons of school age, and of this number 73,843, or 90.2 per cent, were deaths attributable to the thirty-seven specified causes. The table would seem to warrant the conclusion that at the present time there are annually in the United States, among children and young persons of school age, with estimates brought down to 1913, 12,229 deaths from tuberculosis of the lungs, 11,812 from accidents, 6,056 from diphtheria and croup, 5,455 from typhoid fever, 4,996 from organic diseases of the heart, 3,504 from appendicitis and typhlitis, 3,481 from scarlet fever, 2,648 deaths from lobar pneumonia, and 2,301 from ill-defined forms of pneumonia. These are the principal causes of death and with few exceptions they all fall strictly within the field of preventive medicine and scientific methods of public hygiene.

The table presents some very interesting medical and moral problems in the minor causes of death, which, however, require on this occasion no extended discussion. The mortality from malaria is unquestionably underestimated in that the non-registration area of the United States includes the entire rural South, where malaria continues to be more or less common, especially, of course, in the low-lying and ill-drained lands of the coastal plain and the delta region. The mortality from tetanus, represented by 575 deaths in 1911, is also probably an underestimate, but no thorough inquiry has been made into the geographical distribution of what is, without question, a strictly preventable disease. The mortality from cancer (including Sarcoma), represented by 462 deaths at ages five to nineteen, is of special interest to students of the subject of malignant diseases, since, as a general principle of medicine, it is often assumed that cancer is of comparatively rare occurrence during the early years of life. As shown by the table, there were approximately 127 deaths from cancer at ages five to nine, and 335 at ages ten to nineteen. The mortality from acute articular rheumatism is relatively high and represented by 1,660 deaths at ages five to nineteen, and the same conclusion applies to diabetes, represented by 980 deaths. Both of these causes are probably closely related to erroneous methods of nutrition, and possibly the same conclusion applies to acute nephritis and Bright's disease, represented respectively by 910 and 1,501 deaths during the year 1911.

Acute anterior poliomyelitis is represented by 397 deaths in 1911, but the variable incidence of this disease does not warrant definite conclusions on the basis of a single year, since its epidemic occurrence might easily double or treble the annual mortality. Epilepsy is represented by 636 deaths. The probable close relation of many cases of epilepsy to uncorrected eye-strain suggests far-reaching possibilities of preventing what must be considered one of the most lamentable causes of death in childhood and early adolescence. The large loss of life from appendicitis, represented by 3,363 deaths, suggests the obvious neglect of early operative treatment, which, according to absolutely trustworthy statistics, is entirely successful in the overwhelming majority of cases. The

mortality from simple peritonitis, represented by 574 deaths; puerperal sepsis, represented by 638 deaths; and puerperal albuminuria, with 417 deaths, all suggest shortcomings in medical practice or neglect or delay in medical attendance, since in a large majority of cases these diseases also fall strictly within the preventable class. Deplorable aspects of early adolescence are revealed by 632 deaths from suicide at ages ten to nineteen, although there would seem to be no very conclusive evidence that child suicides are materially on the increase, as is apparently the case in certain European countries. There can be no question of doubt, however, that many suicides could be prevented by more skilful attention to obvious evidences of abnormal or disturbed mentality, the symptoms of which have been so admirably described in the monumental work on *Adolescence*, by G. Stanley Hall. The fact that during 1911 there should have been 560 homicidal deaths of children and young persons reflects the low moral standard of the entire United States in the increasing disregard for the sanctity of human life. As brought out by my analysis of the homicide record of American cities, the rate has rapidly increased from an average of 4.9 per 100,000 of population during the decade ending with 1892, to 7.5 for the decade ending with 1912.¹

Numerically, however, of most importance are the three causes first referred to, that is, tuberculosis of the lungs, accidents, and diphtheria and croup. The problem of tuberculosis has fortunately been made a matter of nation-wide concern during recent years, although as yet insufficient attention has been given to the occurrence of tuberculosis in infancy and early childhood. The fact is frequently overlooked that the proportionate mortality from tuberculosis of the lungs is highest at ages twenty-five to thirty-four, and there are the most convincing reasons for accepting the view that the disease is contracted, as a rule, during early infancy or early adolescence. The urgency of more scientific research into the causes of tuberculosis in infancy and childhood, and the best possible methods of prevention, might properly be suggested to the National Association for the Study and Prevention of

¹ See my discussion of the Homicide Record for 1912 in *The Spectator*, a New York insurance periodical, for Nov. 6, 1913.

Tuberculosis, which has rendered such conspicuous service in bringing about a general reduction in the death-rate from this widespread and deplorable disease. The problem, however, of providing more adequately and more in conformity to medical requirements, for the needs of tuberculous school children, is strictly the concern of educational authorities, and reference may appropriately be made here to the admirable discussions of the subject in the annual reports of the Medical Officer (Education) of the London County Council, and the Chief Medical Officer of the Board of Education of England and Wales.

It would serve no practical purpose to discuss the prevention of diphtheria and croup and other acute infectious diseases of childhood and early adolescence, since more or less adequate public attention is being given to these subjects by the public health authorities throughout the country, but it may properly be emphasized, in conclusion, that the most neglected field of child life in its relation to preventable mortality is the lamentable annual loss of young lives by accidents, which in the overwhelming majority of cases are unquestionably the result of gross indifference and neglect on the part of either the parents, the public authorities, or of foolish daring and exploits on the part of the children, which could be prevented in at least a number of cases by proper attention to the educational aspects of accident prevention. It is much to the credit of the American Museum of Safety that they have originated a nation-wide campaign in the safety instruction of school children, and too much cannot be said in praise of the hearty co-operation of the educational authorities of the state and city of New York. As far as I know, the safety education of school children has for the first time been made compulsory in the state of New Jersey by a very recent act of the legislature, so that for the present the actual results of such education cannot be reported upon. It requires, however, no very extended knowledge of the deplorable details of accidents to child life to bring out the almost infinite possibilities of life-saving in a direction which, as previously stated, is probably the most neglected phase of the modern problem of the conservation of human life and health.

The mortality of children and young persons of school age involves many other than medical considerations. There is a serious economic loss involved in the needless waste of children's lives, readily shown by a brief consideration of the normal cost of education and the resulting waste to the community in the case of children educated at public expense for a number of years but curtailed in their normal expectation of life by preventable deaths in early childhood or early adolescence. The average cost of public-school education, ages five to nineteen years, is approximately estimated by the Bureau of Education at \$35 per annum. On the assumption that there are 85,000 deaths per annum at ages five to nineteen in the United States at the present time, and that the average duration of education previous to death is five years, the net estimated loss per pupil would be \$175, and \$14,875,000 for the entire mortality. This loss is absolute in every sense of the word, and may be restated in the words that annually some eighty-five thousand children die in this country at a period of life when they have received, more or less at public expense, a considerable amount of costly education, without any actual or prospective financial returns to the community. The education authorities are, therefore, equally interested with those responsible for the public health in the more effective conservation of child life as an economic problem, while to parents and the community at large the preventable mortality of children is primarily a question of improved methods of the medical supervision of school children, of the more effective control of acute infectious diseases, of the elimination of needless accidents, and higher standards of personal hygiene in childhood and early adolescence.¹

¹ For a more extended discussion, see my address on "Medical and Social Aspects of Child Labor," *Proceedings National Conference of Charities and Correction*, 1903, and "Medical and Physical Examination of School Children," *Quarterly Publication American Statistical Association*, June, 1911.

APPENDIX A
MORTALITY AT SCHOOL AGES
(United States Registration Area, 1911)

Diseases	Ages 5-9	Per-cent	Ages 10-19	Per-cent	Ages 5-19	Per-cent
Typhoid fever.....	747	4.1	2,551	7.6	3,298	6.4
Malaria.....	104	0.6	166	0.5	270	0.5
Measles.....	501	2.8	303	0.9	804	1.6
Scarlet fever.....	1,485	8.2	620	1.8	2,105	4.1
Whooping cough.....	243	1.3	32	0.1	275	0.5
Diphtheria and croup.....	2,778	15.3	883	2.6	3,661	7.1
Influenza.....	99	0.6	232	0.7	331	0.6
Tetanus.....	151	0.8	211	0.6	362	0.7
Tuberculosis of lungs.....	579	3.2	6,815	20.3	7,394	14.3
Acute miliary tuberculosis.....	106	0.6	544	1.6	650	1.3
Tubercular meningitis.....	606	3.3	490	1.5	1,096	2.1
Abdominal tuberculosis.....	142	0.8	374	1.1	516	1.0
Other forms of tuberculosis.....	180	1.0	456	1.4	636	1.2
Cancer (all forms).....	80	0.4	211	0.6	291	0.6
Acute articular rheumatism.....	419	2.3	627	1.9	1,046	2.0
Diabetes.....	153	0.8	464	1.4	617	1.2
Simple meningitis.....	368	2.0	302	0.9	670	1.3
Cerebrospinal meningitis.....	240	1.3	217	0.6	457	0.9
Acute anterior poliomyelitis.....	148	0.8	102	0.3	250	0.5
Epilepsy.....	82	0.5	319	1.0	401	0.8
Acute endocarditis.....	214	1.2	413	1.2	627	1.2
Organic diseases of the heart.....	830	4.6	2,191	6.5	3,021	5.9
Broncho-pneumonia.....	622	3.4	336	1.0	958	1.9
Lobar-pneumonia.....	530	2.9	1,071	3.2	1,601	3.1
Pneumonia (undefined).....	553	3.1	838	2.5	1,391	2.7
Diarrhoea and enteritis.....	413	2.3	179	0.5	592	1.1
Appendicitis and typhlitis.....	588	3.2	1,531	4.6	2,119	4.1
Intestinal obstruction.....	142	0.8	186	0.6	328	0.6
Simple peritonitis.....	108	0.6	254	0.8	362	0.7
Acute nephritis.....	253	1.4	320	1.0	573	1.1
Bright's disease.....	239	1.3	707	2.1	946	1.8
Puerperal sepsis.....	.....	402	1.2	402	0.8	
Puerperal albuminuria.....	.....	263	0.8	263	0.5	
Disease of bones.....	118	0.7	200	0.6	318	0.6
Suicides.....	.....	398	1.2	398	0.8	
Accidents.....	2,384	13.2	4,758	14.2	7,142	13.8
Homicides.....	31	0.2	322	1.0	353	0.7
Total 37 specified causes.....	16,236	89.6	30,288	90.4	46,524	90.2
All other causes.....	1,876	10.4	3,203	9.6	5,079	9.8
Total deaths at school ages.....	18,112	100.0	33,491	100.0	51,603	100.0

Total deaths at all ages, United States registration area—839,284.

APPENDIX B

ESTIMATED MORTALITY AT SCHOOL AGES
(Continental United States, 1911)

Diseases	Ages 5-9	Ages 10-19	Ages 5-19
Typhoid fever.....	1,186	4,049	5,235
Malaria.....	105	263	428
Measles.....	795	481	1,276
Scarlet fever.....	2,357	984	3,341
Whooping cough.....	386	51	437
Diphtheria and croup.....	4,410	1,402	5,812
Influenza.....	157	368	525
Tetanus.....	240	335	575
Tuberculosis of lungs.....	910	10,817	11,736
Acute miliary tuberculosis.....	168	863	1,031
Tubercular meningitis.....	962	778	1,740
Abdominal tuberculosis.....	225	594	819
Other forms of tuberculosis.....	286	724	1,010
Cancer (all forms).....	127	335	462
Acute articular rheumatism.....	665	995	1,060
Diabetes.....	243	737	980
Simple meningitis.....	584	479	1,063
Cerebrospinal meningitis.....	381	344	725
Acute anterior poliomyelitis.....	235	162	397
Epilepsy.....	130	506	636
Acute endocarditis.....	340	656	996
Organic diseases of the heart.....	1,317	3,478	4,795
Broncho-pneumonia.....	987	533	1,520
Lobar-pneumonia.....	841	1,700	2,541
Pneumonia (undefined).....	878	1,330	2,208
Diarrhoea and enteritis.....	656	284	940
Appendicitis and typhlitis.....	933	2,430	3,363
Intestinal obstruction.....	225	295	520
Simple peritonitis.....	171	403	574
Acute nephritis.....	402	508	910
Bright's disease.....	379	1,122	1,501
Puerperal sepsis.....		638	638
Puerperal albuminuria.....		417	417
Disease of bones.....	187	317	504
Suicides.....		632	632
Accidents.....	3,784	7,552	17,336
Homicides.....	49	511	560
Total 37 specified causes.....	25,770	48,073	73,843
All other causes.....	2,979	5,087	8,066
Total deaths at school ages.....	28,749	53,160	81,909
Total deaths at all ages, continental United States—1,332,197.			

NOTE.—The above figures should be increased by approximately 4.2 per cent to obtain the estimates for 1913.

AN EXPERIMENT IN THE SUPERVISED STUDY OF MATHEMATICS

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The method of giving a double period, part to recitation and part to preparation of the lesson under the supervision of the instructor, has been used in comparatively few schools and in comparatively few subjects. In a few cases mathematics has been taught in this manner. This method gives an opportunity for taking care of the various abilities in the class and it is the opinion of most of those who have used the method that the results warrant its continuation. An objection on the part of school authorities arises from the supposed increased expense. In view of these facts it seemed useful to compare experimentally the efficiency of the supervised study of mathematics with that of the usual method and if possible to form some idea of their relative costs.

The experiment herein described was conducted with classes in beginning plane geometry. From a group of sixty students who were to begin this subject two classes were selected in the following manner. The names of the sixty students were written on cards which were then shuffled. From these cards thirty-six were drawn at random. These students had completed three semesters of algebra, and with the averages of their algebra grades as a basis the thirty-six students were divided into two groups of eighteen each and of abilities as nearly equal as possible.

The following table, in which *S* refers to the supervised class, *U* to the unsupervised class, gives a comparison of the algebra averages of the two classes:

AVERAGE OF		MEAN DEVIATION FROM OWN AVERAGE		AMOUNT OF VARIATION IN		NUMBER ABOVE TOTAL AVERAGE		NUMBER BELOW TOTAL AVERAGE	
S	U	S	U	S	U	S	U	S	U
86.68	87.2	4.61	5.35	28	21	9	10	9	8

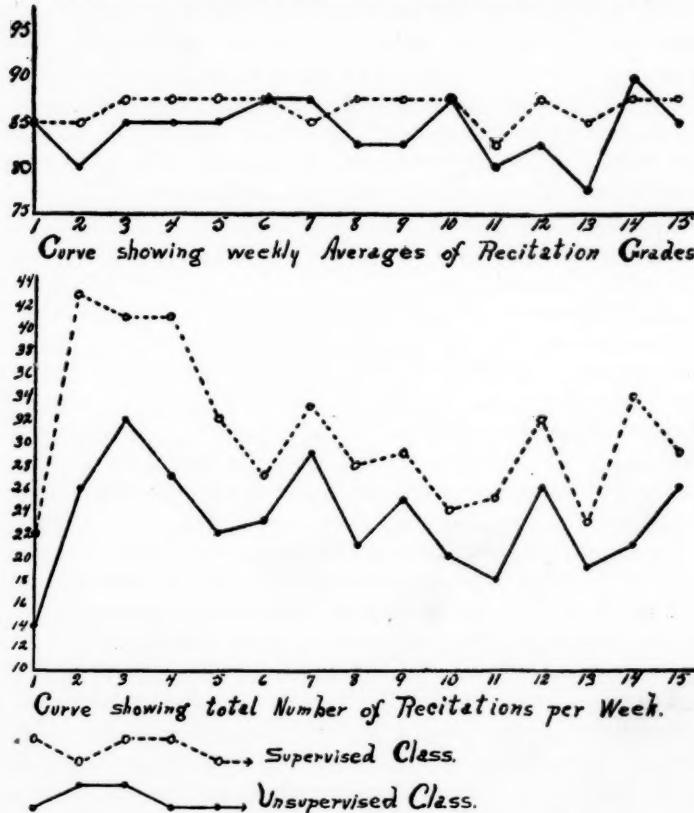
In four of the five points of comparison the unsupervised class has a slight advantage, while in the mean deviation the supervised class has the advantage. From this it would seem that the two classes were practically of the same ability, there being perhaps a slight advantage in favor of the unsupervised class.

The unsupervised class recited the first period in the day and then made their preparation in the study-room or at home. The supervised class recited the second period in the same manner as the other class did but remained the third period to make its preparation for the following day. During this period the students gave all of their time to the study of geometry with the understanding that they were not required to give any outside time to the subject. Each student of the supervised class kept a notebook at the instructor's desk. After the student had prepared his advanced lesson to his own satisfaction he was given additional work for his notebook, thus making it possible to keep every student busy during the entire hour. The students were free to call for help any time during the preparation period but all such help was given in the form of suggestions and questions. An effort was made to teach the child how to study geometry. Both classes were given the privilege of coming to the instructor for help during his consultation period, this help being given in the manner stated above.

A record of both the amount and the quality of the recitation work was kept. The amount of work was indicated by the number of times students made definite recitations, such as demonstrations and constructions. The quality of the work was indicated by a recitation grade given at the time the recitation was made. A comparison of these records for the two classes is shown in the graphs below. In each curve the horizontal units represent weeks. The vertical units of the first curve represent weekly averages, while those of the second curve represent the total number of recitations per week. The continuous curves represent the work of the unsupervised class and the dotted curves represent that of the supervised class. An examination of these curves shows that the supervised class had the higher average for ten of the fifteen weeks. The unsupervised class ranked higher for two weeks and the

averages were the same for the other three weeks. The second set of curves shows that the supervised class made the larger number of recitations every week throughout the semester.

In accordance with the school organization, at the close of the first and second six weeks examinations covering the work of those



periods were given. At the close of the semester a final examination covering the entire work of the semester was given. These examinations consisted of propositions and exercises previously discussed in class. At various times there were given tests consisting of exercises which had never been taken up in class. The

final examination covered a two-hour period; all the other tests covered forty-minute periods. The same questions were used for both classes in each test. In each examination more problems were given than any student could hope to solve and the students were told to answer as many as possible. With the exception of the final examination the papers were graded on a basis of the quality of work and the quantity of work did not enter into the grade. However, the number of problems solved was kept as a part of the student's record. In the case of the final examination the grade depended upon both the quality and the quantity of work. All papers were graded by the instructor but in such a manner that he did not know whose paper he was grading nor to which class it belonged until they were all graded.

The results of the examination are given in the following table:

KIND OF EXAMINATION	NO. OF EXAM.	AVERAGE OF CLASS		AVERAGE NUMBER SOLVED	
		Supervised	Unsupervised	Supervised	Unsupervised
Six-weeks Examinations.....	1	77.3	68.7	4.2	3.55
	2	81.2	80.4	4.3	3.9
Final Examination.....	1	92.4	80.1	12.7	12.2
Tests consisting of New Materials.....	1	82.4	73.9	4.8	4.4
	2	87.3	70.2	4.8	3.7
	3	77.6	56.2	2.1	2.1
	4	82.8	77.3	4.2	3.8

In each of the six-weeks examinations and the final examination the supervised class excelled in both the average grade and the average number of problems solved. As these examinations covered only the work discussed in recitation, the results indicate that this class had mastered the text better than the unsupervised class. In each of the remaining four tests the average grade of the supervised class was decidedly better than that of the unsupervised class and in only one case did the average number of problems solved by the unsupervised class equal that of the supervised class. As stated above, these tests consisted of problems which were new to both classes and the results therefore indicate that the supervised class was the more able to attack new problems, thus contradicting the arguments of those who believe that supervised study makes the student dependent upon the instructor.

As stated above, the members of the supervised class kept notebooks in which they wrote up exercises after they had completed their daily preparation. The weaker students did but little of this work but some of the stronger students had as many as fifty exercises in their notebooks. The average number for the class was eighteen. This not only resulted in an increase in the amount of work done by the class but afforded an excellent opportunity for adjusting the work to the various abilities of the class.

At the close of the semester all students of the supervised class had passing grades while two of the other class failed. This was true although one student¹ of the supervised class had been absent on account of sickness for three weeks, and the lowest algebra grade of this class was decidedly lower than the corresponding grade of the unsupervised class. The difference in these results is accounted for by the fact that the instructor had a better opportunity to give individual instruction to the weaker members of the supervised class.

At the beginning of the semester some of the students were opposed to supervised study and asked to be transferred to other classes. Soon this opposition died out and there came requests from members of other classes to be transferred into the supervised class. The final attitude of the members of both classes toward the work was indicated by their written answers to the following question which was asked at the close of the semester: "If a supervised class in second-semester plane geometry should be conducted next semester would you care to be in it?" Every student answered this question in the affirmative.

The students of each class were also asked to state approximately the amount of time outside of class spent in preparation. The average time thus spent by the supervised class was eight minutes, making a total of about forty-five minutes spent in their daily preparation, while the unsupervised class spent about forty-two minutes. The time spent by the two classes was practically the same but the supervised class had the advantage of continuous, intensive study in the presence of the instructor, who was ready to make suggestions whenever a student found himself in difficulty.

¹ This student missed the last three weeks of school, but returned for the final examination. He made a passing grade in the work he had studied but was conditioned to make up the three weeks' work during the summer.

The school officials object to the supervised study because of the additional expense. From the work of these two classes it is not possible to make an exact comparison of the costs of the two plans but some idea may be formed. During the semester the unsupervised class made 352 recitations, such as demonstrations of propositions, constructions, etc. The supervised class made 466 such recitations. This would enable the instructor to handle twenty-four students in the supervised class and keep as closely in touch with the individual as he does when he has eighteen in an unsupervised class. Most teachers with whom I have talked have expressed a willingness to handle four classes with supervised study rather than five with the other plan. This would allow the instructor to care for ninety-six students under the supervised plan against ninety under the ordinary method. It is argued that the difficulty in handling a class increases more rapidly than the number of students in the class. We admit the truth of this statement, but there are other factors in favor of supervised study which have not been considered in making this comparison. We have not taken into account the teacher's contact with the student during the study period which in itself is a strong factor in balancing the increased difficulty due to the larger number in the class. The decreased number of failures lessens the number of students repeating the subject and hence lessens the number of students to be handled as well as the deadening effect that such students have on the other members of the class. Consultation periods were kept by the instructor during which members of both classes were free to come for help. It naturally occurred that a large majority of these calls came from members of the unsupervised class. Such periods, so necessary under the ordinary method, would be needless if the supervised method were used.

The foregoing results seem to warrant the statement that supervised study of mathematics would not increase the expense of instruction as much as some have supposed and that the students under such instruction not only master the text more thoroughly but are more able to take the initiative in new work than are the students under the unsupervised plan.

RELIABILITY OF GRADING WORK IN HISTORY

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This is the third of a series of studies on the variability of values placed by teachers upon examination papers. The first two dealt with English and mathematics respectively.¹ The present investigation, dealing with work in history, was conducted in exactly the same manner as the two preceding ones. An answer paper written as a final examination in United States history in a large high school in Wisconsin was manifolded by plates so as to reproduce the original precisely as presented by the pupil.

QUESTIONS

Write on any five of the seven questions.

1. Contrast the motives and methods of settlement of the French and English colonists in America.
2. (a) Point out all the possible points of difference between what the English and American idea of representative government was about 1775. (b) Give two concrete illustrations of how the above difference caused open friction.
3. (a) Explain clearly what the British plan of attack for 1777 was. (May be outlined.) (b) Point out why the date, October 17, 1777, was such an important date in American history.
4. Describe the "Period of Confederation." (a) Name of instrument of government used. (b) Defects in plan as proved by experience.
5. (a) Trace the steps leading up to the Federal Convention. (b) What objections were given to the ratification of the constitution? (c) Why is the constitution considered such a "wonderful instrument of government"?
6. (a) Contrast the personal characteristics and political policies of Hamilton and Jefferson. (b) What was Washington's policy relative to foreign alliances and how has it been observed since that time?
7. Describe industrial conditions in the United States in 1800 as to: (a) various industries engaged in; (b) their relative importance and why. (c) Define the various kinds of tariff. (d) Why did the South object to the protective tariff?

¹D. Starch and E. C. Elliott, *School Review*, XX, 442-57; XXI, 254-59.

History

I The English settlers that came to America, came generally for wealth, or on account of religious persecutions. The first English settlers were in search of wealth which they failed to find along the American coasts. The French came for adventure and with some attempt of settlement. They gain the friendliness of the Indians from the start but some of the English tried to drive the native inhabitants before them as they entered the new land and traveled westward. The French engaged almost from the start in fur trading and in exploring expeditions thru Canada. The English were the downfallen nobles who came to this country in hopes of regaining their wealth. They knew nothing about agriculture and therefore starved to death or returned to England. The French landed in the warmer months prepared for exploration and adventure which result in better settlements at first. The English later on adopted conditions favorable to American settlers.

[Reduced to about one-half]

ANSWERS¹

1. The English settlers that came to America, came generally for wealth, or on account of religious persecutions. The first English settlers were in search of wealth which they failed to find along the American coasts. The French came for adventure and with some attempt of settlement. They gain the friendliness of the Indians from the start but some of the English tried to drive the native inhabitants before them as they entered the new land and traveled westward. The French engaged almost from the start in fur trading and in exploring expeditions thru Canada. The English were the down fallen nobles who came to this country in hopes of regaining their wealth. They knew nothing about agriculture and therefore starved to death or returned to England. The French landed in warmer months prepared for explorations and adventure which resulted in better settlements at first. The English later on adopted conditions favorable to American settlement.

2. The English thought the king was the representative of the people and who was to have all power. The American idea was of a representative government was a government with someone at the head with the power in the hands of the people or some representatives representing the people. That is, the passage of the stamp act by England, which was a tax upon the American people without representation. The English government simply passed the act and put it into effect without asking the American people whether or not they thought it just. Another instance was the tax levied upon tea imported into American colonies.

3. The British plan of attack for 1777 was to separate the New England states from the other states by gaining control of the Hudson River and the Lake Champlain region. This was to be done by sending Howe to Philadelphia who was to receive reinforcement from Clinton left at New York. Burgoyne was to come down thru the Lake Champlain region and receive help from Carlton of Canada and from St. Leger by way of the Mohawk River. The expedition failed because of the few men left with Clinton, the jealousy of Carlton and the defeat of St. Leger. (b) The date Oct. 17, 1777 is important in Am. history because it is the date beginning the independence of the United States and also setting forth capability of the United States in defending herself against other nations.

6. (a) Jefferson was a man who did not look at the showy side of life the way Hamilton did. His dress compared with that of Hamilton was poor, taking under consideration the offices held by Jefferson. Jefferson rode horseback to congress and tied his own horse while Hamilton thought he should of put on more style. Jefferson's idea was peace with all nations. He also sympathized with the French which were revolting at this time. Hamilton although a good man in politics seemed to adopt unjust methods in bringing forth his ways. Hamilton was a Federalist and Jefferson a republican. During one election Hamilton was among the men of the Federalist party who

¹The errors are reproduced as in the original.

planned that in throwing away their votes would bring their party representatives into offices. Their plan were defeated by themselves throwing too many votes away.

b) Washingtons policy was peace with all nations, and an independent nation on equal terms with all nations. This policy has be followed out by presidents following him.

7. The industries engaged in, in the U. S. in 1800 are agriculture, commerce, and fishing. Commerce was about this time beginning to take an important stand in industrial conditions in U. S. Agriculture was important because it had been the only occupation of the American people and cotton was their chief export. Fishing was of somewhat importance but not so much as agriculture and commerce.

(c) The various tariffs are tariffs for protection and revenue. Tariff for protection is a duty levied upon goods imported into the country to bring the outside manufactured articles up to a higher price than the articles manufacture in the U. S. Tariff for revenue is a duty on imports or exports as a tax to help pay government expenses.

(d) The south objected to protective tariff because it meant exportation of their cotton to Am. ports which paid less, the journey was more dangerous, and the north would be reaping all the benefits. The overland route to the northern states was in such a condition it could not be traveled upon. The water routs contain dangerous points and the south would have to sell to the northern ports cheaper than to England and then pay a higher price for the manufactured article.

A set of questions and a copy of the answer paper were sent to some two hundred high schools in the Middle West with the request that the principal teacher of history grade this paper according to the practices and standards of the school.

One hundred and twenty-two papers were returned. Eight could not be used because the data were incomplete. Seventy were returned from schools whose passing grade was 75, twenty from schools whose passing grade was 70, twenty from schools whose passing grade was 80, and four from schools whose passing grade was 65. The comments and criticisms on the returned papers show that they were evaluated with much care and discrimination.

The values assigned by the seventy schools whose passing grade was 75 are shown in the distribution chart of Fig. 1. The range of the grades is indicated along the base line and the number of schools assigning a given grade is indicated by the number of dots above that grade. Thus the grade 70 was given to the paper by six

different schools and the grade 71 by three different schools, etc. The distribution of these marks is very similar to that found for the English and mathematics papers. The extreme range extends from 43 to 92. The median value is 70.8 and the probable error is 7.7.

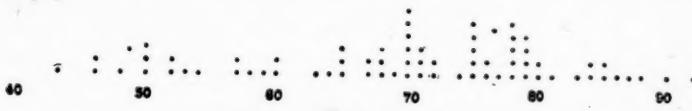


FIG. 1

The values assigned by the twenty schools whose passing grade was 80 are 70, 70, 83, 84, 80, 75, 71, 85, 62, 50, 53, 65, 80, 76, 75, 72, 55, 75, 78, 75. The median grade is 74.8. The values assigned by the twenty schools whose passing grade was 75 are 45, 60, 51, 65, 72, 75, 65, 63, 61, 18, 35, 88, 77, 77, 48, 66, 70, 67, 67, 55. The median grade is 65. The four schools whose passing grade was 65 returned marks of 66, 40, 76, and 52.

The chief results of this series of investigations may be summarized as follows:

1. The marks assigned to the same paper by different teachers vary enormously, in fact much more widely than the average teacher would anticipate. The findings with the history paper fully corroborate the findings with the English and mathematics papers. The range and distribution of the marks of papers in these three subjects are almost identical. The extremes in each case extend nearly over the entire marking scale.

2. The variability or unreliability of marks is as great in one subject as in another. Contrary to current belief, grades in mathematics are as unreliable as grades in language or in history. The probable error is very nearly the same in all subjects, being 5.4 for the English grades, 7.5 for the mathematics grades, and 7.7 for the history grades. Hence the variability of marks is not a function of the subject but a function of the examiner and of the method of examination.

3. The immense variability of marks tends obviously to cast considerable discredit upon the fairness and accuracy of our present methods of evaluating the quality of work in school. No matter how much anyone may wish to minimize the utility of marks,

they have, nevertheless, an indispensable administrative value from the standpoint of the school, and a real personal value from the standpoint of the pupil.

The chaotic status revealed by our present inquiry raises two rather important questions: First, what are the factors that produce such wide divergences in the evaluation of school work? And second, what may be done to secure greater uniformity and more objective reliability?

An answer to the first question has been worked out by means of tests conducted by one of the writers¹ and published elsewhere. These results may be briefly quoted here. There are four major factors that produce the variability of marks: "(1) Differences among the standards of different schools, (2) differences among the standards of different teachers, (3) differences in the relative values placed by different teachers upon various elements in a paper, including content and form, and (4) differences due to the pure inability to distinguish between closely allied degrees of merit." Taking the probable error of 5.4 found for the English grades, the special tests showed that the "fourth factor contributes 2.2 points, the third 2.1 points, the second 1.0 point, and the first practically nothing toward the total" probable error. Hence the largest factors are the fourth, third, and second.

The second problem is more difficult to solve. One suggestion would be the adoption by all schools of some uniform marking system such as is outlined in the article just quoted;¹ that is, in brief, the adoption of a scale with a definite number of steps and the preparation of a standard curve or table showing the number of times each particular step should in the long run be assigned. Courses in education should give instruction regarding the technique and methods of marking and evaluating school work. Teachers could thus be led to appreciate the problems involved and to make efforts toward greater uniformity.

Another possible suggestion would be the development and general use of standard tests and scales for measuring efficiency in all subjects similar to the ones already devised for arithmetic, composition, and handwriting.

¹D. Starch, "The Reliability and Distribution of Grades," *Science*, XXXVIII, 630-36.

THE STUDY OF FRENCH IN THE PUBLIC HIGH SCHOOLS OF THE UNITED STATES

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The two questions at issue are: Is it possible to teach French—I mean conversational French—in the public high schools? Admitting it to be possible, is it advisable?

It seems now fully demonstrated that the public high school has become the university of the middle class, for statistics prove that scarcely 4 per cent of the public high-school students, after graduation, enter the universities or colleges. Therefore the large majority of the students who pass through the public high schools come out of the middle class, and seem satisfied with the elementary education they receive in that public institution. They consider themselves sufficiently prepared for the battle of life. In my judgment, they ought to be, provided they avail themselves of the multiple advantages so generously offered them by modern popular education.

Now, the question arises: Who is the person best qualified to teach conversational French? It seems rational to say that French nationality, backed by education and experience, is the absolute requisite for any person who claims to teach French. A German, an American, a Japanese may have mastered the French language to some extent, but, with few exceptions, the standard of his pronunciation will be always below that of any native Frenchman.

The next question is: Is French taught in the public high schools by native teachers? To answer that question, I shall take the city of Chicago as an illustration.

There are 23 teachers of French scattered in the 21 public high schools of the city of Chicago. Out of these 23 teachers 4 are French born, and may consequently be considered capable of imparting French pronunciation to their pupils. The other 19 are either American, German, Irish, or of any nationality except French. Some of them may speak French, but none of them is

willing to boast of it. They use their French with wise discretion and creditable modesty, and rather depend on their grammar and lexicons to make up for their deficiency.

For the use of those teachers, the authors of the books placed in their hands have, with the assistance of the ever-obliging publishers, imagined a certain figurative pronunciation, a sort of phonetic code, spelled in hieroglyphic signs, placed next to each French word in the vocabulary. This is intended to imitate French sounds and inflections. To me, this sounds more like Chinese, although, I must confess, I have a very imperfect knowledge of that language. To the French-born teacher, this grotesque arrangement is an object of horror, as it hinders him seriously in his work because of its irresistible attraction for the majority of his pupils who, in spite of repeated warnings, are bound to resort to it outside of the classroom. Moreover, it has the disastrous effect of creating in the mind of the students such confusion that it becomes impossible for them to spell a French word correctly. By means of this scientific device, those teachers are expected to inculcate in their students the fundamental principles of the language of Molière and Victor Hugo!

Out of the five French-born teachers referred to above, four have passed the fifty mark some years ago, which means that their teaching days are numbered. When they drop out of active service, they will be replaced by substitutes, until the whole French teaching body is in the grip of the mysterious code of imitative pronunciation.

Such are the present conditions of French teaching in the public high schools of Chicago, and Chicago may well congratulate itself, for there is not another city in the West that can boast of so many native French teachers in its public high schools. I took this one city only as an example. *Ab una dise omnes.*

Therefore it appears evident that the time is not far distant when the study of French in 90 per cent of the high schools in the United States will be on the same footing with Latin and Greek. This must come to pass.

This state of thing is due to the fact that the small number of French people who emigrate into this country stop in New York, Boston, Philadelphia, and the larger cities of the East, and settle

there. A few venture to the Middle West, none to the far West. In fact the French are poor colonists; they rarely desert their native land. The number of French people living in Chicago is very limited; they belong, mostly, to the working class, and are, as a rule, thrifty and law-abiding. Some of them excel in the culinary art where their services are highly appreciated and amazingly compensated. In comparison, the native French teachers make a poor showing.

It is now evident that the teaching of the French language in the American public high schools, so far as the speaking of it is concerned, is impracticable, utterly impossible, absolutely hopeless. It is a dream, and should be sent back to dreamland, where it belongs. The days of the French-born teachers are nearly over; none will come to succeed them, and, after all, it is just as well, as their deficiency in English pronunciation and ignorance of the American temperament make them utterly unfit for good discipline.

A few years ago I had the good fortune to judge of the merit of the French taught in the Denver public high schools. A girl was introduced to me who had graduated a few months before, and was on her way to Smith College. I profess the highest respect for the Denver high schools and do not mean in the least to speak in disparagement of them, but, to be polite, I must say that the French spoken by that Denver girl was rather picturesque. Decidedly, the Denver brand did not compare favorably with the Chicago article!

I can fairly imagine how she was received by the sophisticated French professors of the aristocratic eastern institution. For the last ten or fifteen years a small number of graduates from certain Chicago high schools have been welcomed by the Smith French professors, but the supply is limited, and will soon be exhausted. Real French speaking will become a thing of the past in the public high schools. French will figure only as an ornament in the official curriculum. Within ten years, it will be classed among the dead languages. A few faithful lovers of the French language will find an everlasting consolation in the phonograph, the always handy professor with the genuine Parisian twang.

The second question now arises: Is conversational French in the public high schools advisable? For this question I shall again take Chicago as an illustration.

What are the means by which a student can keep in constant touch with a certain subject for an indefinite period after leaving the high school? I know of only two: either by conversing, speaking, attending lectures, participating in conversations and debates, or by reading and writing.

Out of the two thousand pupils who graduate every year from the Chicago public high schools, 97 per cent belong to the middle and the working classes, people in various stations in life, some in good circumstances, some struggling for a livelihood, some poor. The other 3 per cent are the wealthy, those who move in high society, travel, go abroad, tour around the world, thus keeping up, improving, and completing their education through the ever-changing scenes and spectacles displayed before them.

The 97 per cent who compose the large majority will, shortly after leaving school, scatter in every direction, entering various careers and professions. A great number take a course at some business college, which opens for them a large field in the commercial world.

Now, is this great mass of former French students liable ever to practice the study of French in its conversational form? Will they move in society where French is spoken? Can they afford French professors, tutors, or companions? Will they go to France to practice their French? Will they find in this or other cities occasions to practice it, or attend meetings, lectures, or plays in French? In short, is there any chance, any probability, of their finding a practical use or application of the French they have learned to speak in the public high schools?

No, the frail sentences they had at their command will soon vanish for lack of practice, and a year after leaving school, no trace, no vestige of them will be left. I do not hesitate to say that hundreds, nay, thousands of former French students stand ready to bear out my statement. They are now sorry for the many weeks and months they were unconsciously and foolishly made to waste in phonetics, in superhuman efforts to acquire a pronunciation for which they have no use, to the detriment of a thorough training in grammar which would now enable them to apply their study of French to some practical use, that is, to reading the French language either in the fields of science, commerce, and industry, or in the

realm of literature, from the great French classics to the *roman en vogue* of the present day.

It is no use trying to combine conversational and grammatical French in a class of forty pupils, especially if, in compliance with certain orders, French must be the exclusive language of the classroom at the very start, and the use of English strictly prohibited. The session opens with the inevitable drill in phonetics, then the wave of painful and laborious questions and answers is fairly under way when the bell rings and the 47-minute session is over, and the grammar is left in the cold—I mean in the desk. But I must say most of the pupils are strongly in favor of that method; it naturally appeals to them, for it nearly does away with the grammar, and young people hate grammar, as proved by their blatant deficiency in English.

An attempt to teach both grammatical and conversational French in a large class, and teach both correctly and thoroughly, is a fruitless attempt; one must be detrimental to the other; the intellectual element is too heterogeneous or refractory; the general spirit lacks congeniality, harmony, and uniformity. The popularity of that teaching under such conditions is based exclusively on its groundless reputation and deceitful attractiveness.

In the public high schools of France, English is taught according to that method, and with great success. Teachers are not allowed to use French in the classroom. In Paris, as in almost all the large cities of France, English is spoken in every shop, café, restaurant, theater, and public building. In Paris alone, there is an English-speaking population of one hundred and fifty thousand persons, and one can make the trip from Paris to London in six hours. In Chicago, the French-speaking population is limited to about three hundred, and it takes at least ten days to cover the four thousand miles that separate the metropolis of the West from the capital of France.

I have been told that there is more German spoken in Chicago than in Berlin. I suppose this refers to the quantity. It shows that, in order to practice the study of German, a pupil has only to go out of his home and talk German to the first person he meets. If he fails in his attempt, he is sure to be successful in a second encounter.

It is easy to understand that French speaking is successfully taught in private schools, where classes are very small, and pupils are paying a good price for what is considered a social accomplishment. The high school is a public, and, therefore, a democratic institution, from which "fads" ought to be "kicked out," to use the rather emphatic expression of a prominent member of the Chicago Board of Education. When pupils take up the study of Latin and Greek in the public high schools, they do not do so with the expectation of ever using those languages in their daily life, whether it be in Chicago, Denver, or San Francisco. Those languages are taught with a view to training the mind, impressing their relation with the English language, and explaining the etymology of most of the words applied to sciences and modern inventions.

Sad though it be, 97 per cent of the students of French in the public high schools will make no more use of French in their daily life than they will of Latin and Greek, so far as speaking French is concerned, owing to the deplorable fact that they will never be able to put it into practice and will naturally and unquestionably forget it. Therefore, conversational French in the public high schools should be classed among the "fads." A truly democratic educational system is founded on practical, rational, and permanent instruction rather than short-lived social accomplishments.

A French-born teacher would find much more satisfaction in the adaptation of the method employed in private schools to the large classes which confront him in the high schools, were this adaptation a possibility. The immediate results are gratifying, and apparently convincing. On a visitor it has an astounding effect, especially if the visitor has only a slight smattering of French. He will follow the proceedings with intense interest; he will be amused by the eagerness of the students to answer questions; he will be favorably impressed with the cheerful atmosphere of the classroom; he will enjoy the show; he will find no words to express his admiration for the teacher and his method. And if he is, perchance, a man of standing and influence, he will occasionally say a good word for that teacher: it may help his promotion.

On the other hand, grammar is a dry subject. Syntax contains no poetry. Idioms are not conducive to humor. On a visitor

the impression will be oppressively tiresome, especially if he happens to be a former "flunker" in English. He will soon yawn distressingly, and furtively sneak away from the room, carrying with him a most pitiable opinion of the teacher and his *modus docendi*.

If, on the contrary, he has mastered his own language, if he finds intellectual enjoyment in comparative philology, he will follow with interest the vivid demonstrations on the blackboard and the lively and instructive discussions they arouse among the students, the Latin quotations and the etymological study derived therefrom, the careful analysis of every part of speech, the logical construction of every sentence—in short, all that helps train the mind and enables the student to acquire a perfect and permanent understanding of a modern language of high standard.

It goes without saying that after one year of a thorough grammatical training, French could easily be the language of the classroom the second year, providing the teacher in charge happened to speak French, which is seldom the case.

However modern a language may be, it will fall into desuetude in countries where its use is occasional, and eventually become discarded. All the good-will and heroic efforts of a handful of teachers to keep it alive will prove powerless, and their laudable ambition will have to yield to the inevitable.

The exclusive private schools and fashionable colleges will remain the final home of conversational French in this country, while the democratic public schools, both elementary and high, will keep on being the educational melting-pot for children of all races, colors, and conditions, where German is an established necessity and French an unknown luxury.

But, in spite of the regrettable fact that, for reasons explained above, French is so rarely spoken in the United States, France stands among the leading nations of the world, and the French language is one of the most popular and instructive living languages.

That French literature is appreciated and enjoyed in the city of Chicago is evidenced by the fact that nine thousand persons, mostly students or former students, applied for French books at the public library alone during the year 1912. Those nine thousand people were either unable to speak French or to find anyone with

whom to speak French, but they found in the public library the key to matchless treasures in every line of trade, industry, science, art, and letters.

As a matter of observation, at the beginning of every term, I always make it a point to inquire from a few among the large number of beginners what their object and purpose were in choosing French from the list of studies. Their answers do not vary materially. It happened that "French fitted their program," or they heard that French was "cute," or they were told French was a "cinch." After a week or so, however, a good many realize that French is far from being a "cinch," in spite of its probable "cuteness," and they hurriedly drop it, and replace it by whatever presents itself. On being asked whether their parents had been instrumental in their selection of French, those pupils, unhesitatingly, answer that their parents never interfered, never bothered with their children's course of studies, and that they were at liberty to choose whatever they pleased.

Were the parents interviewed on the subject, the mother would say she highly approves her daughter's selection of French on the ground that the family may some day take a trip to Paris, where the girl would be of priceless assistance in getting information from the chauffeurs, and in translating the various menus in the restaurants. The father flatly refuses to be interviewed.

This is all one can gather about their conception of the practical use of a foreign language. This seems to be the full extent of their interpretation of intellectual culture.

I have no authority to discuss here the momentous problem of elementary education. I may be allowed, however, to venture the opinion that so long as parents display such gross ignorance and criminal indifference toward their children's education, there will be no hope for improvement in this lamentable state of affairs.

It may easily be predicted that a perfect *entente* and intelligent co-operation between parents and teachers would result in wonderful changes. From such a collaboration would rise a new generation whose standard in scholarship and achievement in ethics and morals would form a wholesome contrast with the now-existing conditions.

TOBACCO AND SCHOLARSHIP

THOMAS WARRINGTON GOSLING
Cincinnati, Ohio

A recent investigation in a large high school of the Middle West offers additional material for discussion in connection with the interesting question of the relationship between the scholarship of students and their use of tobacco. The facts were supplied by the one hundred and three boys of the Senior class. The percentage of error in the statements given is probably small, because in the first place the friendly relations between the instructor and his pupils were favorable incentives to truthful answers to the questions that were asked; in the second place, the boys were assured that any information which they might give would be used for statistical purposes only, and would not be used in any way to embarrass or to discredit them; in the third place, the answers were secured by a personal interview with each boy and not by the usual questionnaire method.

The following questions were asked:

- (1) Do you smoke now, or have you ever smoked, cigarettes, cigars, or pipe?
- (2) How old were you when you smoked for the first time?
- (3) How long did you continue to smoke?

In addition, many, though not all, of the boys were asked to tell why they refrained from smoking; why they smoke now; or why they stopped smoking after having begun it.

The instructor then secured from the official school records the general average in scholarship for each of the one hundred and three boys for the first term of the present year—a period of about five months from September, 1912, to February, 1913. From these two sources—the answers of the boys and the official records of the school—the following summary was made:

1. Total number of boys included in the report (class of 1913), 103.
2. Number of boys who smoke, 45; or 43.7 per cent of the total.
3. Number of boys who do not smoke, 58; or 56.3 per cent of the total.

4. Average scholarship record for the first term (1912-13) for the total number (103), 78.3 per cent.
5. Average scholarship record for the first term (1912-13) for those who smoke (45), 77.2 per cent.
6. Average scholarship record for the first term (1912-13) for the non-smokers (58), 79.1 per cent.
7. Number of smokers with scholarship record over 90 per cent, 2 (1.9 per cent of the total; 25 per cent of the group).
8. Number of non-smokers with scholarship record over 90 per cent, 6 (5.8 per cent of the total; 75 per cent of the group).
9. Number of smokers with scholarship record below 70 per cent, 8 (7.8 per cent of the total; 61.5 per cent of the group).
10. Number of non-smokers with scholarship record below 70 per cent, 5 (4.9 per cent of the total; 38.5 per cent of the group).
11. Average scholarship record for the 8 failures among the smokers, 66.9 per cent.
12. Average scholarship record for the 5 failures among the non-smokers, 69.4 per cent.
13. Average scholarship record for those who have never smoked (21), 81.6 per cent.
14. Average scholarship record for those who formerly smoked and then quit (37), 77.7 per cent.
15. The first five in rank among the whole number (103) are non-smokers.
16. The lowest six in rank among the whole number (103) are smokers.
17. The highest three in rank among the whole number (103) have never smoked.
18. Of the upper one-fifth of the class (21 out of 103),
 - (a) 8 are smokers—7.8 per cent of the total, 38.1 per cent of the group.
 - (b) 13 are non-smokers—12.6 per cent of the total, 61.9 per cent of the group.
19. Of the upper one-half of the class (53 out of 103),
 - (a) 21 are smokers—20.4 per cent of the total, 39.6 per cent of the group.
 - (b) 32 are non-smokers—31.1 per cent of the total, 60.4 per cent of the group.
20. Of the lower one-half of the class (50 out of 103),
 - (a) 24 are smokers—23.3 per cent of the total, 48 per cent of the group.
 - (b) 26 are non-smokers—25.2 per cent of the total, 52 per cent of the group.
21. Number of present smokers who began to smoke at 13 years or under, 18.
22. Scholarship of present smokers who began to smoke at 13 years or under (18), 75.3 per cent.
23. Number of present smokers who began to smoke at 14 years or over, 27.
24. Scholarship of present smokers who began to smoke at 14 years or over (27), 78.5 per cent.

It is worthy of note that in every one of the comparisons between the class of smokers and the class of non-smokers, the advantage in scholarship lies with the non-smokers. In the first place the general average for the fifty-eight non-smokers is 1.9 per cent higher than the general average for the forty-five smokers. Even the failures among the non-smokers, with an average of 69.4 per cent, rank higher than the smokers who fail, for the latter have an average of only 66.9 per cent. In each of the groups where comparison was made, the non-smokers make the better showing, as is evident in Table I.

TABLE I

	1	2	3	4	5	6	7
	oo per cent or Above	Upper $\frac{1}{2}$ of Class	Upper $\frac{1}{2}$ of Class	Lower $\frac{1}{2}$ of Class	Failures	First Five	Last Six
<i>Non-smokers—</i>							
Expected percentage.....	56.3	56.3	56.3	56.3	56.3	56.3	56.3
Actual percentage.....	75.0	61.9	60.4	52.0	38.5	100.0	0.0
<i>Smokers—</i>							
Expected percentage.....	43.7	43.7	43.7	43.7	43.7	43.7	43.7
Actual percentage.....	25.0	38.1	39.6	48.0	61.5	0.0	100.0

The "expected percentage" is the same as the percentage of the smokers or of the non-smokers in the total number. If there were no alternative causes, this general percentage would be uniform throughout all the groups. For that reason it is called the "expected percentage." Note that in the higher groups—1, 2, 3, and 6 of the table—the non-smokers exceed the expected percentage and in the lower groups—4, 5, and 7 of the table—they fall below the expected percentage, whereas the smokers reverse this record by falling below the expected in the higher groups and by exceeding the expected in the lower groups.

In regard to the second question—"How old were you when you smoked for the first time?"—the answers show that some boy yielded to the temptation at almost every age from six to eighteen. Out of the total number of one hundred and three, eighty-two have smoked at some time or other. Thirty-seven of these have abandoned the practice. The age of sixteen was the most dangerous age, as Table II shows.

Some of the former smokers report that one experience with tobacco was enough for them, while others report that they have continued the practice of using tobacco for years.

The reasons given for refraining from smoking altogether or for discontinuing the practice are most interesting. Several boys state that they promised their parents to abstain and that they have kept the pledge. A pledge to mother or father seems to be a good anchor for a boy. Some boys stopped smoking because they realized that the practice was injurious; still others say that "there was nothing in it" for them. One boy frankly says that he was caught and that he has had no desire since; another says naïvely that smoking made him sick. The influence of a good companion is shown in the frank confession of a boy who reports that it was through the good counsel of a classmate that he was led to abandon the practice.

TABLE II

Age	6	7	8	9	10	11	12	13	14	15	16	17	18
Began to smoke..	1	2	0	3	8	4	11	4	11	11	14	11	2

The number involved in the present inquiry is too small to warrant any dogmatic statements or to justify any positive conclusions. The facts, however, do raise certain queries in the mind. For example, one wonders whether the habit of smoking is the cause of low scholarship, or whether there are several concomitant causes. One wonders, again, whether there may not be some common cause out of which issue independently both smoking and low scholarship. There comes a time to many boys when they no longer hold themselves to such strict adherence to their ideals as formerly; when they do not keep as firm a grip upon their conduct; when they do not hold themselves to such strict accountability; when they allow a certain relaxation of self-control. May not this lowering of personal standards of conduct, this relaxation of self-control, account for the habit of smoking, for low scholarship, and perhaps for other unfortunate habits of boys? If this be true, we are face to face again with the old problems. How can a boy be taught self-control? How can high ideals be made the ruling principles in the life of a boy?

DISCUSSION

MODERN-LANGUAGE INSTRUCTION IN NORMAL SCHOOLS

When the first normal schools were founded in the United States in the late thirties and early forties of the past century, the modern languages were not made a part of the curriculum for the reason that there was no great demand for teachers in these subjects in the secondary schools. But as time passed, and the courses were enlarged and broadened, and as the modern tongues became a part of the course in our public secondary schools, French and German were added to the normal-school training, along with Latin and Greek.

It is a matter of interest to inquire whether under the influence of the study of education and educational methods in normal schools the method of instruction in modern languages has shown improvement beyond that found in the colleges and universities, which until late years have made but little of the study of methods.

This problem may be approached in various ways but it must be solved, no doubt, by a combination of several methods. The best method would be personal visitation of the classrooms by a competent judge. But since no one person is able to visit any great number of classrooms in the various sections of the country, we shall probably never have an estimate based entirely upon this method.

An auxiliary method is to note the textbooks used and the statement concerning courses and methods used in the schools as published in their catalogues. And finally acquaintance with the teachers themselves, their training, general scholarly activity, and the books they publish, forms a fairly reliable criterion of their classroom work.

For the purposes of this study personal visitation was made use of to some extent, principally in the schools of the Central West and the Northwest, and the results of such observations are included in the data on methods given below. Beyond this the methods in use were determined from catalogues, and more especially inferentially from the description of the courses in the catalogues.

As to the textbooks used in normal schools the decided tendency to use the less bulky grammars would indicate that less stress is laid on grammatical minutiae and more upon the ability to read, or to read and speak. Beyond this there is little divergence from the books used in colleges and universities.

There is little information available concerning the preparation of the teachers of modern languages in normal schools, but it has been shown¹ that normal-school teachers as a whole have rather inadequate preparation and that inbreeding is prevalent in these schools. Certain it is that the teachers of modern languages do not figure at all prominently in the meetings of the Modern Language Association of America, nor in the various state and sectional modern language associations, as may be seen by running through the volumes of the publications. There are comparatively very few scholarly contributions by normal-school teachers. Merriam² has shown that the proportion of works by normal-school, high-school, and college teachers is 5, 13, and 48.

One should expect, however, that under the influence of the study of educational methods in the normal schools the teachers of the modern tongues would have become dissatisfied with our old style of textbooks and would have demanded better long ere now, when the direct method is being imported from Europe.

But such has not been the case. Rather have they been content to use much the same texts used in colleges and universities and even in the high schools. And they have furnished proportionally far fewer modern language texts than have the college teachers. An examination of the catalogues of four of the most prominent publishers of modern language texts in the United States discloses the fact that normal-school teachers have furnished less than 5 per cent of the grammars, introductory books, and manuals of composition and conversation published in this country.

However, after this rather adverse arraignment, which must certainly, in great part, be laid to the penny-wise-and-pound-foolish custom of overloading the teacher with teaching in these schools, it must be recorded that the teachers of modern languages in normal schools have made more rapid advance in the actual classroom use of the direct method than have their colleagues in the colleges and universities.

The direct method aims to teach the foreign language for the greatest part without the intervention of English. Grammar is thoroughly taught, although partially inductively, and in small instalments, while conversational ability is considered a valuable by-product. This method which is now in the opinion of most competent judges the most

¹ J. L. Merriam, "Normal School Education and Efficiency in Teaching," *Teachers College, Columbia University, Contributions to Teaching*, No. 1, New York, 1905, pp. 119 ff.

² *Op. cit.*, p. 149.

effective is used in 13+ per cent of the 117 normal schools investigated,¹ but is used in only 5+ per cent of our colleges and universities (890 modern language departments investigated). And this must be attributed, it seems to me, to the emphasis laid on the study of methods in normal schools. Here is a group of teachers who in point of training and of time to devote to research are less fortunate than the college and university men. But they have, under the continual needs and inspiration of pupils whom they are training for a specific service, striven to give to their students not only a knowledge of the grammar and the literature, but of the spoken language as well. To be sure, this advance is not phenomenal but it is noticeable—as we will show still further.

The grammar-reading-conversation method is an excellent method. It consists in making the start with the grammar, in English, but reading forms the center of the instruction, with conversational ability as a third object. To achieve the last the texts are often discussed in German instead of merely translating the entire passage into English. This method is the most prevalent one in normal schools and is found in 51+ per cent of these schools, whereas it is used in only 37+ per cent of the colleges and universities.

The grammar-translation, or grammar-reading method, is a distinctly inefficient method which aims to teach by means of paradigms and set translation, after the time-honored fashion of instruction in the classics. This method is used in 42+ per cent of the colleges but in only 23+ per cent of the normal schools.²

CHARLES HART HARDSCHIN

MIAMI UNIVERSITY

¹ Space does not permit tabulating the entire data, but the normal schools investigated are distributed as follows: Alabama, 3; Arizona, 2; California, 4; Connecticut, 4; Colorado, 1; Georgia, 1; Idaho, 2; Illinois, 4; Indiana, 1; Iowa, 1; Massachusetts, 8; Maryland, 2; Michigan, 3; Minnesota, 6; Kansas, 2; Kentucky, 3; Louisiana, 1; Maine, 4; Missouri, 5; Montana, 1; Nebraska, 1; New Jersey, 2; New Mexico, 2; New York, 9; North Dakota, 2; Ohio, 4; Oklahoma, 2; Pennsylvania, 12; South Dakota, 3; Texas, 4; Virginia, 3; Vermont, 2; West Virginia, 4; Washington, 2; Wisconsin, 7. The more prominent schools were investigated. Seven of the list each taught no modern language.

² It may be of interest here to note some facts concerning the general status of the modern languages in the normal schools. For statistics on this instruction see the author's *The Teaching of Modern Languages in the United States*, United State Bureau of Education, 1912 (to appear soon).

German is, as might be expected, taught mostly in the Central West and the Northwest, while French is taught principally in the South and East. And it is specifically prescribed in some cases in New England. Spanish is taught in the normal schools of New Mexico, Arizona, Ohio, and sporadically elsewhere. Italian is found in only one school in our list. German is taught in 72 of these schools and French in 45.

EDUCATIONAL NEWS AND EDITORIAL COMMENT

MEETING OF COLLEGE TEACHERS OF EDUCATION

The forthcoming meeting, in conjunction with the Department of Superintendence of the National Education Association in Richmond, Virginia, beginning February 23, 1914, will consist of two sessions and a luncheon. One session will be devoted to a report of the Committee on the Rating, Placing, and Promotion of Teachers, the chairman being Professor F. E. Thompson, of the University of Colorado.

The other session will take up a consideration of the significance of educational surveys for departments of education in colleges and universities. City surveys will be discussed by Professor Hanus, of Harvard, and state surveys by Professor Hillegas, of Columbia.

In addition to the papers presented at the sessions, the *Yearbook* will contain a bibliography of educational surveys by Professor Strayer, of Columbia, and a classified list of educational investigations now under way by members and their students, compiled by the secretary.

CARTER ALEXANDER, *President*

ASSOCIATED ACADEMIC PRINCIPALS OF NEW YORK

The twenty-ninth annual meeting of the Associated Academic Principals of the State of New York will be held in Syracuse, December 29, 30, and 31. The program of this important gathering is printed in full.

MONDAY, DECEMBER 29

2:00 Informal Meeting and Registration in the lobby of the Hotel Onondaga.
8:00 Joint Meeting with other educational bodies.
Address of Welcome—Superintendent P. M. Hughes, Syracuse.
Response—Principal Ernest L. Merritt, Gloversville.
Address—Subject to be announced: Dr. John H. Finley, Commissioner of Education and President of the University of the State of New York.

TUESDAY, DECEMBER 30

9:15 Report of Committee on Function of the High School.
General Report of Committee by Chairman, Professor George P. Bristol, Cornell University.
"The Peculiar Office of the High School in a System of Education, When Shall It Begin, How Shall It Be Expressed," Inspector E. W. Lyttle, Education Department.
Discussion.

"The High School as an Aid to Better Citizenship," Professor George P. Bristol.

Discussion.

2:00 Address—"The Policy of the State in Determining the Qualifications of Her Teachers," Dr. Thomas E. Finegan, Third Assistant Commissioner of Education.

Discussion.

3:15 Report of Committee on Syllabus and Examinations, Assistant Superintendent L. F. Hodge, chairman, Yonkers.

Discussion.

4:00 Joint Meeting with other educational bodies assembled in memory of the late Commissioner of Education, Andrew Sloane Draper.

"Draper, the Man," Mr. H. H. Horner, Chief, Examinations Division.

"Draper's Contribution to New York State Education," Dr. William Nottingham, Regent of the University.

"Draper's Place in American Education," C. W. Bardeen, Editor of School Bulletin.

Report of Committee on Resolutions, District Superintendent Darwin L. Bardwell, chairman, New York City.

5:30 College and Fraternity Reunions.

8:30 Joint Meeting with other educational bodies.

Lecture furnished by the Syracuse Chamber of Commerce: "A Certain Arrogance in Educational Theorists," Dr. William H. Maxwell, Superintendent of Schools of the City of New York.

WEDNESDAY, DECEMBER 31

9:15 Question Box—Questions on University Scholarships, Medical Inspection of Schools, Miscellaneous, Dr. Charles F. Wheelock, Second Assistant Commissioner of Education.

Address—"Forestry and the Public Schools of New York," Dr. Hugh P. Baker, Dean of New York State College of Forestry, Syracuse University.

Report of Committees—(a) Legislation; (b) Athletics; (c) Necrology.

Report of Treasurer.

Election of Officers.

Introduction of President-elect.

Adjournment.

THE GRAND RAPIDS CONVENTIONS (OCTOBER 21-25, 1913)

The seventh annual convention of the National Society for the Promotion of Industrial Education, and the organization meeting of the National Vocational Guidance Association were held at Grand Rapids, Michigan, October 19 to 25.

The citizens of Grand Rapids had made unusually thorough preparation for the reception of their guests, and the programs of both societies gave promise of rich reward to those who might attend them. It was to be expected that this would be the largest conference in the history of the National Society, and also would bring together a considerable number of those interested in the organization of the new Vocational Guidance Association. Even more significant than the notable increase in the number of delegates was the fact that they represented a much wider territory than formerly, indicating a spread of interest in vocational education and guidance toward the west and south.

THE NATIONAL VOCATIONAL GUIDANCE ASSOCIATION

As it seems desirable, for the purpose of this review, to consider as one convention the meetings of both societies, a prefatory word is necessary regarding the organization of the National Vocational Guidance Association.

This association is the outgrowth of a movement started in Boston in 1910 and brought to the point of organization at New York in 1912 when the Second National Conference on Vocational Guidance provided for an organization committee. This committee called the present conference and consummated the organization.

This new association has been brought into existence with the full appreciation of the fact that educational associations are multiplying rapidly. At the same time it was felt that the term "vocational guidance" had taken such a prominent place in the recent discussions of educational questions, and that so many widely divergent practices were being inaugurated in its name, that, for a time at least, the careful thought and earnest investigation of the men and women especially interested in this phase of social and educational work might be made more effective by purposeful joint action. Especially was it felt that the association might serve as an agent for the collection and distribution of information as to what is being done in different states in the furtherance of the purposes of vocational guidance.

GENERAL NATURE OF THE PROGRAM

The conference as a whole was marked by the emphasis given to the consideration of methods and to details of management rather than to the discussion of theories. However, there was due recognition of the fact that the movement is still new and that the majority of teachers, school officers, and employers, throughout the whole country, are only

slightly interested and are therefore in need of such inspiration and enlightenment as only a great convention can give. The addresses which were given for this purpose, while relatively few, were excellent and effective, and the impetus given to the movement in Michigan alone, by this means, will be one of the important results of the conventions.

Papers relating to the larger social, economic, and educational phases of vocational education and vocational guidance were presented by such speakers as Mr. William C. Redfield, Miss Ida M. Tarbell, Professor George Herbert Mead, Mr. Owen R. Lovejoy, Miss Sophonisba P. Breckinridge, and Dr. Leonard P. Ayres. To recount the deeply significant lessons of these addresses would be impossible within the limits of this review but all emphasized the great need of developing a higher degree of efficiency in the workers of the rising generation, and contended that the recognition of this need was consistent with the highest social and educational ideals. Though inspirational in nature, these addresses generally based their theories on an accurate statement of accepted facts, rather than on visionary ideas of what society ought to be.

THESES OF VOCATIONAL EDUCATION

A few of the specific points of thoroughly practical application which were made in these inspirational addresses are as follows:

1. Vocational guidance and industrial education have already demonstrated their ability to retain children in school two or three years beyond the compulsory limit, thus extending the influence of our systematic, cultural education while training practical efficiency.
2. Guidance and training will increase *both* the income of the employer and the wage of the worker, and it is the duty of the educator to see that the benefit to the former does not overshadow the interests of the latter.
3. Our schools need the influence which the industries can exert over them quite as much as industry needs the help of the school. When this influence is rightly applied the school curriculum will be shot through and through with industrial interpretation.
4. While it may be necessary for many children early to become wage-workers, every effort should be made to save them from long periods of stultifying labor.
5. Traditional education has valuable characteristics which should be carried over into the new types of schools—stability, continuity, and balance.
6. The recurrent attacks on our schools by employers are futile but the interest and co-operation of the employer provide one of the most important doors through which the community gains admittance to its schools.

7. Without the influence of the outside world the schools unconsciously exercise an unfortunate and negative vocational guidance for the majority of our early adolescent children. The forward educational movement is but a part of the great social advance in the midst of which the present generation is living, and consequently the social worker, who of necessity is a student of conditions as they are, wields an influence which is of first importance. These workers by scientific methods are gradually establishing a fact basis regarding industrial and social conditions, upon which the school authorities can safely rely and the school activities be securely built.

8. We should distinguish between the "emergency problem" with which we are now confronted and the working-out of a rational system of guidance and training for a later generation; in the former case we must make the most of the present available "jobs" and wise use of supplementary educational agencies, but choosing positions for people is preferable to choosing people for positions.

9. The employer of those whom we call unskilled factory workers has been caught in the maelstrom of fierce competition and needs not so much our criticism as our help, not alone for his sake but especially for the sake of his employees.

10. All this points to the supreme need of exercising patience "which means moving step by step."

THE NEW YORK VS. THE WISCONSIN PLAN

As noted above, most of the addresses dealt concretely with questions of method, but even these were not without their inspirational moments. Two such questions were: "Should Michigan have vocational education under 'unit' or 'dual' control?" and "Should Michigan have compulsory part-time education now or work toward it gradually by passing through the stages of voluntary schemes with state aid, local option later; this to be followed by state-wide compulsory law?" The discussion of these questions brought forth some of the finest statements of the fundamental principles which underlie industrial education that were made during the whole convention. But the issue was, in a very genuine sense, a "practical" one and might have been stated (as the names of the speakers would indicate) as follows: "Should Michigan follow the lead of New York state, or of Wisconsin, in providing for state-aided vocational education?" The speakers from Wisconsin were Louis E. Reber, dean of University Extension Division, University of Wisconsin, Madison, Wisconsin, and Warren E. Hicks, deputy superintendent for industrial education, state of Wisconsin, and from New York State were John Dewey, professor of philosophy, Columbia University, New

York City, and Arthur D. Dean, chief of Division of Vocational Schools, New York State.

A large part of the discussion of these questions centered around certain "resolutions" which were issued in circular form from the office of the state superintendent of public instruction, Madison, Wisconsin, September 22, 1913, and upon which we commented editorially in our last issue. It may be said the Dr. Dewey's opinions were in substantial agreement with our editorial and that Mr. Dean's article will be found in full in the January number of the *School Review*. The representatives of the Wisconsin plan dwelt upon the efficiency of limiting or confining the work in the beginning to the training of self-supporting wage-workers in continuation schools, and of leaving to the future the development of breadth and catholicity.

THE TRAINING OF GIRLS AND WOMEN

The largest meeting of the convention was that held for the discussion of important questions relating specifically to the training of girls and women. The program might have been referred to under any of the classifications used in this review, for it was at once inspirational, informational, and constructive. This meeting shared with the meeting on legislation the distinction of presenting the only questions on which there was any actual controversy. It would seem that there are rational grounds for genuine differences of opinion as to whether "industrial training" or "home-making" should receive the major emphasis in the education of the girls and women for whose advancement the National Society for the Promotion of Industrial Education is working. That some girls need one kind of training to the exclusion of the other, that this question is one which pre-eminently demands consideration of the individual, and that there is danger of losing sight of the real issues in a cloud of uninformed sentiment was shown all too clearly.

THE PROGRAM IN PART

The papers which dealt in most minute detail with present and pressing problems confronting the educational and social worker in both vocational guidance and industrial education were as follows:

How Can the Evening School Best Meet the Needs of the Wage-Worker?

1. "The Use of the Short Unit Course in Part-Time and Evening Schools," Wesley A. O'Leary, director Evening Teachers' Training Class for Trade Workers, Pratt Institute, New York.

A short unit course is a brief course or limited number of lessons meeting some specific and common need or requirement of a group

of workers, such as blue-print reading for machinists, blue-print reading for carpenters, shop arithmetic for electricians, free-hand drawing for pattern-making.

Part-Time Schooling.

1. "The Development of Part-Time Education in a Large City," W. M. Roberts, district superintendent in charge of vocational schools and classes, Chicago, Ill.
2. "Part-Time Schooling for the Unskilled Industries," W. Stanwood Field, director evening and continuation schools, Boston, Mass.
3. "The Development of Part-Time Education in a Small City," S. O. Hartwell, superintendent of schools, Kalamazoo, Mich.

Vocational Guidance within the Public-School System. Chairman, Frederick G. Bonser, Teachers College, Columbia University, New York.

1. "By means of a System of Differentiated Courses," Alfred P. Fletcher, assistant superintendent of schools, Rochester, N.Y.
2. "By Systematic Courses of Instruction in Vocational Opportunities and Personal Characteristics," F. M. Giles, principal, DeKalb Township High School, DeKalb, Ill.
3. "By Developing 'Placement' and 'Follow-up' Work," Sophonisba P. Breckinridge, University of Chicago, Chicago, Ill.; Charles Marten, director of industrial arts, Jewish Orphan Asylum, Cleveland, Ohio.
4. "'The Continuation Schools of Cincinnati as a Means of Vocational Guidance,'" E. D. Roberts, assistant superintendent of schools, Cincinnati, Ohio.

How Shall We Study an Industry for Purposes of Vocational Education and Vocational Guidance? Chairman, A. Lincoln Filene, member of Executive Committee, National Society, and president of Boston Vocation Bureau.

1. "From the Standpoint of Vocational Education," C. R. Richards, director, Cooper Union, New York.
2. "From the Standpoint of Vocational Guidance," Frank M. Leavitt, University of Chicago, Chicago, Ill.

PRINTED REPORTS AVAILABLE

It may be stated here that it is expected that the papers read before the National Vocational Guidance Association will be issued as a bulletin of the United States Bureau of Education. The proceedings of the National Society for the Promotion of Industrial Education are issued from the office of the society in New York City. In this connection may be mentioned the report of the Committee on the Certification and Training of Teachers. This report represents the work of a special committee, Mr. A. Lincoln Filene, chairman, appointed last year to consider this most important question. While revisions are still to be

made, the tentative report which is now in print will be of great value to those who are organizing industrial schools or classes.

Meetings of the local women's clubs, teachers' associations, the Association of Commerce, the Central Labor Union, the official representatives of state departments of vocational education, and the Sunday services in the churches all offered opportunities for spreading the information relating to this great movement to improve the opportunities for genuine popular education. Eighteen addresses were made at morning and evening services in the churches on the Sunday preceding the convention and the last conference was held Saturday afternoon, thus filling the week completely with discussions related to vocational guidance and industrial education.

While not wholly pedagogical, the convention was pronounced by one of the best-known educators of the Middle West to be an educational convention of high order. In one respect it showed a marked contrast to most conventions of teachers where the same or kindred topics are discussed in that it was almost wholly lacking in violent and indiscriminate criticism of the public-school system. The whole conference gave one the impression that those present were determined to broaden the scope of the public schools so that these popular institutions will make for vocational efficiency in those who cannot have or who do not desire the extended schooling leading to the professional and directive vocations and to secure their social advance wherever possible, not alone by training but by employment supervision, if not by actual guidance into positions, and to maintain that such guardianship should be accepted by school authorities not only as a duty but also "as a rich opportunity and a consecrated pleasure."

F. M. L.

SEEKING THE RIGHT KIND OF CO-OPERATION

The following letter is suggestive of a new line of endeavor for the public schools:

MIDDLETOWN, CONN., September 2, 1913

*To Prospective Employers of High-School Pupils or Graduates,
Middletown, Conn.*

GENTLEMEN OR LADIES:

There are each year in our high school a number of boys and girls who need to work afternoons and Saturdays in order to pay their expenses while getting an education or who would be greatly benefited by some such work. Some pupils would be glad to work in exchange for board and room.

We have a form which these pupils fill out and which we keep on file for

reference. It includes information concerning the age, the amount of education, the name and address of former employers and of references, the kinds of work previously done, the kinds of work that the pupil can do and prefers, and the time when and how much he or she can devote to out-of-school work. Besides this information, we learn from a personal acquaintance with the pupils and their progress and behavior in school considerable about the physical and mental fitness and general reliability for different kinds of work. Last year the greatest demand was not for boys but for girls, and the work was tending children or assisting in light housework.

While we cannot agree always to secure for a prospective employer just the sort of pupil he may desire for any work, still we shall be very glad to assist to the best of our ability in finding the right workman.

There is another very important part of this letter. What employment worth while can you offer any of our graduates, boys or girls, who on leaving us wish to enter such promising fields of work as their own city can offer them? Our graduates have been instructed in the following courses: the general or English, the classical and, after June, 1914, the commercial, the industrial and agricultural course for boys, and the practical arts course for girls, which course covers considerable instruction in drawing, home decoration, sewing, laundering, cooking, etc. If you wish to employ any of our graduates, or if you would care to do so, provided they were instructed and trained to do certain things not included in our present courses or to do them better than graduates in the past—if you need or may need the services of any of our graduates or if you have any suggestions to offer concerning the improvement of the education we give in high school, kindly feel free to communicate in full your needs and suggestions. We ask your co-operation in making our high school fulfill properly and adequately its function.

Did you ever think that one of the most serious as well as constant losses Middletown suffers is to allow annually the flower of her youth, the graduates from her local high school, to leave her borders in order to earn a livelihood? Are there practically no openings worth while as a life-work for our graduates here in Middletown? Is there any way the Middletown Business Men's Association or the Twentieth Century Club or anyone else can arrange so that we can save our city this irreparable loss of young blood, brains, and energy that should be kept here and made to build up a larger, better, busier, and more beautiful Middletown?

If you need the services of any of our students for part time or of any of our graduates or other students who may be obliged to leave school before graduation, kindly write us explaining fully and definitely the nature of the work, and the kind of pupil desired.

Thanking you for your co-operation, I am

Very truly yours,

W. A. WHEATLEY,

Superintendent of Schools

CREDIT FOR OUTSIDE WORK

The Board of Education of St. Cloud, Minnesota, has adopted the most elaborate scheme for giving credit for outside work that has come to the attention of the *School Review*. The purpose, according to a bulletin published by the board, is to unite the home and the school, to connect the work of the school with things going forward outside, and to encourage the children to spend a part of their spare time at some useful occupation—in a measure to direct their work along the line of practical, everyday, homely tasks—to give all a chance and to train them for work and service, not merely the acquisition of knowledge, that they may the better fit into actual conditions about them—to prepare for complete living—to make the watchword, industrial, social, and home efficiency.

It will be noted below that the better class of students are given more opportunity to engage in outside work; the weaker students are allowed only one credit out of sixteen; and, safeguarding the whole plan, is the provision that a very large share of the students' time, at least $\frac{1}{2}$, is given to the older subjects of the curriculum. Following is given the plan as outlined by the Superintendent of the St. Cloud schools:

THE HIGH-SCHOOL DIPLOMA

For graduation 16 Units are required, at least 15 of which shall be regular school credits. One credit may be granted for systematic and definite home or continuation work as outlined below.

For *graduation with credit* 17 Units are required, two of which may be for home or continuation work. Standings must average Pass Plus or above 80.

For *graduation with honor* 18 or more Units are required, three of which may be for home or continuation work. Standings must average Pass double Plus or above 90.

Pupils may graduate on the old plan, with 16 or more regular school units. To graduate *with credit* on this basis an average standing of Pass Plus must be obtained, and for graduation *with honor* standins must average Pass double Plus.

OUTSIDE WORK

The following outside work when properly certified will receive credit as indicated:

Regular weekly piano, violin, cornet, pipe organ, or voice lessons, under an accredited instructor, $\frac{1}{4}$ Unit per year for not to exceed four years.

Active membership in any high school or approved city musical organization, $\frac{1}{4}$ Unit per year.

High School Glee Club or Chorus Work, $\frac{1}{4}$ Unit per year.

(Credit for music work is limited to $1\frac{1}{2}$ Units.)

Literary Society Work, or Rhetoricals, Debate, Public Speaking, or Expressive Reading, $\frac{1}{2}$ Unit per year.

Granite or paving-block cutting, or work in any of the local trades, shops, factories, or industries, $\frac{1}{2}$ Unit for each summer vacation.

Clerking in store, bank, bindery, publishing house, or office, $\frac{1}{2}$ Unit for three months.

Steady work on a farm, followed by a satisfactory essay on some agricultural subject, $\frac{1}{2}$ Unit for three months.

Horticulture, gardening, poultry raising, or bee culture with essay, $\frac{1}{2}$ Unit for one season.

Raising one-fourth of an acre of onions, tomatoes, strawberries, or celery, one acre of potatoes, two acres of pop-corn, five acres of corn or alfalfa, $\frac{1}{2}$ Unit.

Running a split road drag or doing other forms of road building for three months, $\frac{1}{2}$ Unit.

Judging, with a degree of accuracy, the different types of horses, cattle, and hogs, $\frac{1}{2}$ Unit.

Selecting, drying, and testing seed corn, $\frac{1}{2}$ Unit.

Faithful definite work in the home, with well-written essay on suitable topic, $\frac{1}{2}$ Unit for three months.

China painting, oil painting, crayon, burnt wood, art, needle, or other handicraft or home decoration work, with exhibit, $\frac{1}{2}$ Unit.

Three months' employment in a dressmaking establishment, $\frac{1}{2}$ Unit.

Three months' employment as nurse, $\frac{1}{2}$ Unit.

Three months' summer vacation travel, with written description, $\frac{1}{2}$ Unit.

"See Minnesota First" trip, under approved instructor, with essay, $\frac{1}{2}$ Unit.

HOME TASKS

The following home tasks when well done and certified by parent or guardian will represent $\frac{1}{2}$ of one Unit or Credit:

1. Shingling or painting the house or barn.
2. Making a canoe or boat.
3. Swimming 300 feet at one continuous performance.
4. Installing three or more electrical conveniences in your mother's home.
5. Taking sole care of an automobile for one season.
6. Preparing one meal alone daily for three months.
7. Baking the bread for three months.
8. Cooking meat and eggs three ways and making three kinds of cake.

Exhibit.

9. Making the beds daily for three months.
10. Doing the laundry work weekly for three months.
11. Making a waist, dress, or nightgown or other wearing apparel, or articles for the home.
12. Making a hat or cap.
13. Keeping a flower garden, with ten choice varieties of flowers.

14. Recognizing and describing twenty different native birds, trees, and flowers.
15. Sleeping for one year in the open air or with open window.
16. Keeping a systematic savings-bank account for one year, with regular monthly deposits.

SUPPLEMENTARY STATEMENT

Thus succinctly the superintendent summarizes important supplementary considerations:

The range of activities offers a wide choice and nearly every student who has been taught to help at home, or who works during vacation, will be able to make at least one unit. The credits are not to be given in lieu of any of the essential subjects now offered in the high school. A clear, concise backbone of academic work is retained. The plan is elective and suggestive and does not interfere in any way with the members of the advanced classes. Students are encouraged to work for extra credits and to graduate *with credit or honor*. No student, unless very mature, is allowed to graduate in three years. The aim is not to cut down the high-school course but to enrich it and so modify the curriculum as to shape the education of the boys and make them wage-earners whenever they find it necessary to become such, either through choice or by compulsion.

OUTDOOR SCHOOLS IN CALIFORNIA

Superintendent of Public Instruction Hyatt has just issued a small illustrated brochure dealing with the subject of outdoor schoolhouses in California. Its illustrations are based upon a Fresno example, a building that was constructed for "a trifle under \$500," and concerning it Superintendent Hyatt says:

In appearance the building is tasteful and beautiful. It has no glass windows; yet the light through the canvas panels—which can be raised entirely around the building—is more perfect and more agreeable than in any other building. It has only one door. It is heated by a little airtight stove. It is so perfectly ventilated that the teachers and the children very much prefer it to any other. . . . Naturally, canvas and screen wire are not as solid and permanent as brick and mortar; yet, the frame, floor, and roof being substantial, the canvas tight-stretched and the screening well put on, the building will give service for a number of years. It seems to afford all desirable protection against both wind and rain. In our California climate, it is much more wholesome in every way for the children than the proudest structure in the state.

The crux of the argument is suggested in the last sentence. In "our California climate" these outdoor schoolhouses are more desirable than they possibly can be in a climate more rigorous. In the east such schools may be considered an experiment. Here, where severe cold is unknown, their success cannot be doubted. It is as if nature herself invited to the outer air, and the effect of such air in revivifying the intellect beyond anything that artificial ventilation can do is understood.

BOOK REVIEWS

The Sexual Life of the Child. By DR. ALBERT MALL. Translated from the German by DR. EDEN PAUL with an introduction by EDWARD L. THORNDIKE. New York: Macmillan, 1912. Pp. 339.

This is the most valuable and least dangerous treatment of this question that has come to the notice of the present writer. It is written by one who has studied the question both as a scientist and as a practicing physician frequently consulted regarding sexual matters, and yet who is never led by his specialism or by scientific theories to abandon his common-sense or to regard the occasional as the usual. The treatment of all topics seems coarsely frank as compared with most other books on this subject which nearly always leave some things to be inferred, yet it is this treatment which leaves nothing for the imagination to do, together with the fact that only essential facts are given regarding individual cases, that makes the book unattractive to those who gratify a low form of curiosity by reading of sex matters.

The topics treated are a historical view of the subject, a description of the reproductive organs, processes, and impulses, their differentiation in childhood and relation to other physical and psychical processes, the pathology, etiology, and diagnosis of sexual manifestations, the importance of the sexual life of the child, the child as an object of sexual practices, and finally an extended treatment of sexual education.

He makes some use of statistical studies but since such studies are not extensive, are often from selected cases and regarding matters concerning which there is much deception, he depends much upon general scientific principles, and common-sense, assisted by such facts as are available from observation, by himself and others, in deciding as to what is normal and what is abnormal.

He believes in the enlightenment of children regarding sex matters but thinks that the school should confine itself chiefly to general biological principles while personal instruction should be given by the mother if practicable. He thinks, however, that warning regarding venereal infection may be given in the last year of elementary schools.

E. A. KIRKPATRICK

FITCHBURG, MASSACHUSETTS

A Study of the Short-Story. By HENRY S. CANBY. New York: Henry Holt & Co., 1913.

If one can follow the suggestion made by Mr. Canby, in his preface to an earlier work¹ on the same subject, and "put aside, at least temporarily, any

¹ *The Short-Story in English.* Henry Holt & Co., 1909.

preconceived opinion of the nature of the short-story," he will find this author's *A Study of the Short Story* a profitable summary of the careers of various short-story types, considered generally as the expression of national temper under the influence of special conditions of time and place. But if the reader is handicapped at the start by an expectation of finding the discussion limited to examples of the brief, strongly unified, impressionistic story—the story whose essential elements of technique have been so eloquently summarized by Brander Matthews in the hyphen of his own term, "short-story," he may be a bit disturbed by finding *Euphues* and *Oroonoko* in its family tree. In the preface to the earlier work Mr. Canby confesses that, rhetorically, these are not short-stories, but goes on to say: "historically they are; for they carry on, and but half emerge from, short-story types." Being thus temporarily persuaded to accept Lilly's *Euphues* as a "dropsical short-story," one easily gulps down the idea that the "Elizabethan drama is the new short-story transformed into another type."

The only serious criticism that can be offered against Mr. Canby's general method is that he seems occasionally to be willing to evolve his types whether or no, and to overemphasize just a little the necessity of "placing" each variety of genius as a definite product of discoverable antecedents. Something like this effect, it must be admitted, awaits any historian who attempts to rationalize the erratic appearances of short-story art throughout the ages. And, as Mr. Canby never allows his theories to obscure his facts, the results of his investigations of the predecessors of the short-story will be of value even to one who does not share his point of view. Scholars will no doubt hold to the earlier work for its maximum of facts and minimum of theory; but the general reader will prefer the introduction to the new book as being clearer, more concise, and in many ways more readable. One who does not know at first hand the old types of story-telling will be grateful for Mr. Canby's concise summaries of the characteristics of those early "stories of life's lesser unities": the tales of Chaucer and Gower and the *Gesta Romanorum*; the *contes dévots*; the French cycles of miracles of Our Lady; saints' yarns of every sort; French *lais*; *fabliaux*; Italian *novelle*; *exempla*, apophyses. But the happiest results of Mr. Canby's evolutionary method of criticism appear in his excellent sketch of the rise of the American short-story and his comments on the work of individual authors. The discussion is illustrated by the inclusion of eleven narratives (admittedly historical types and not "eleven best" short-stories either in matter or in technique). The examples are fairly well chosen, and comprise about two-thirds of the book; but one may venture to predict that the reader will find the real value of the work in the 77-page historical introduction. This is worth while even to one who is familiar with Mr. Canby's longer treatise.

E. M. ALBRIGHT

UNIVERSITY OF CHICAGO

Training the Boy. By WILLIAM A. MCKEEVER. New York: Macmillan, 1913. Pp. i-xviii+3-368.

Among the various types of books on educational subjects two are easily differentiated: those which suggest thoughts and lines of work without entering fully into details and those that give a bill of particulars of the ways and means of attaining the desired end. To do the latter without writing platitudes is exceedingly difficult and for this reason, perhaps, is rarely attempted. The author of the book before us has, however, undertaken this task and has done it very well.

It would be impossible, in a brief review, even to approximate an enumeration of the subjects treated, because they include pretty nearly all of the active interests of boys. To the reviewer, the following passage seems to summarize the thought underlying the book: "It is really imperative that the small boy be provided daily with some constructive work-play activities. It is as natural for him to desire to build playhouses, mud-dams, and 'thing-a-bobs' of other sorts as it is for healthy grown men to desire and need wholesome occupation. *Therefore, one must learn to see things from the boy's point of view, and thus fall in with his childish plans and specifications for constructive play-work.*"¹ The entire book is an attempt to show in detail how this may be done. Beginning with the pre-school period, the author finds that the occupations of even these little youngsters must be planned for, that their training should be directed by a definite purpose. They should have something constructive to do.

Under the "Public School and Adjustment," "Vacation Employment," "Serious Industrial Employment," and "Sending the Youth to College," parents are given valuable advice and suggestions about getting their boys into the right mental attitude toward work. Social training is discussed as an outgrowth of play and recreation instead of being the result, as it is too often thought to be, of rules and prohibitions. Though the author does not say so, the reader is constantly, and properly, impressed with the thought that education and training are inseparable. The book is a protest against the view which divides the mind into compartments, one of which is to be filled with knowledge by the teacher and the other with precepts and maxims of conduct by institutions other than the school.

Those who have followed the author's previous work will not be surprised at the importance which he gives, in his treatment of habits, to the avoidance of tobacco and liquor, and to the relations between boys and girls.

Concerning vocational training the discussion is again sane. The author does not believe it wise to settle the boy's future occupation too soon, to thrust him into a vocation which, later, he may dislike. "Notwithstanding the advantage of every ordinary opportunity of training and schooling, some young men are very late in choosing a permanent calling." Stimulus and opportunity

¹The italics are the reviewer's.

to try oneself are necessary. "Now to stimulate him properly is to touch the nerve centers that seem to be awakening into activity, and to give opportunity is to furnish the specific means of practice called for at the time."

Finally, service training is considered in preparation for citizenship, for social service, home life, marriage and parenthood, and for religious life.

The book is suggestive and valuable for parents who are feeling their way and who, with the best intentions, are often wholly ignorant of the ways and means of helping their boys attain a high type of manhood. The excellent bibliographies, one at the end of each chapter, offer opportunity for further study and a wider outlook upon the subjects treated in the book.

EDGAR JAMES SWIFT

Correlations of Mental Abilities. By BENJAMIN R. SIMPSON. New York: Teachers College, Columbia University, 1912. Pp. v+122. \$1.00.

What sort of mental abilities are most nearly related to "general intelligence"? What most differentiates a group of seventeen efficient graduate students and teachers from a group of twenty unemployed men hanging around the Salvation Army and a Bowery Mission in New York? These are questions which Simpson attacks in his Doctor's thesis. Using fifteen tests individually with each man in these extreme groups, he becomes confident that tests could be so selected that an hour's examination would give a very significant indication of the general ability of an individual. Not only does he believe that it is practicable to talk about "general intelligence," but he also believes it is possible to pick out certain relatively specialized capacities, such as sensory discrimination, motor control, quickness and accuracy of perception, which do not imply the presence of other capacities except to a very limited extent.

In determining which tests are most important for measuring "general intelligence" he groups those tests together which by the closeness of their correlations with one another and by their apparent similarity seem to reach special processes. Subject to the limitations of the experiment he finds that "general intelligence" implies the different abilities tested in the order given below. The figures are averages of the correlations of the tests in each group with the other tests: selective thinking, 0.59; memory, 0.50; association, exclusive of learning pairs, 0.48; quickness and accuracy of perception, 0.45; motor control, 0.26; sensory discrimination of lengths, 0.19.

The significance of the tests is also brought out clearly by tables which indicate the degree to which the "poor" group overlaps the "good" group in each test. Selective thinking again shows up as the important trait which accompanies efficiency. Not one of the "poor" group reaches the lowest of the "good" group in a combined score of five of the most distinguishing tests. Simpson argues for the view that "by far the most influential factor in making for efficiency in these tests is the native capacity of the individual in question, and not simply his training and environment." More years of schooling goes

with higher rank in the combined result of the eight best tests with a correlation of only 0.38. Moreover, the striking differences between the two groups are found in the same traits in which the feeble-minded are shown to differ most from normal individuals.

An important part of the monograph is the summary and criticism of the work which has been done by other investigators, on the correlation of tested mental abilities. Simpson deprecates the emphasis which Binet placed upon the differences in the subjects' ability to adapt themselves to tests. He regards this as a much less fundamental indication of lack of general intelligence than the differences brought out by the tests in the higher mental processes themselves. He finds no justification from his results of Spearman's supposition of a hierarchy of mental functions, depending upon how closely each of these is related to a common central factor.

Taken all together the novelty of its plan and the clearness of its main conclusions make Simpson's monograph one of the most interesting that has appeared in the study of the relationship of mental processes.

J. B. MINER

UNIVERSITY OF MINNESOTA

Social Principles of Education. By GEORGE HERBERT BETTS. New York: Scribner.

In the preface the author posits the statement that education is an ever-changing ideal and has, through the evolution of society, come to be a social function having its highest values in terms of "social efficiency."

The reader is plunged at once into a splendidly arranged and most interesting discussion. Society and the individual, the two fundamental elements of social education, bear a complex, interdependent relationship one to the other, the result being that each is constantly modified. Society furnishes the medium, stimulation, and the criterion of activity, while the self-initiative of the individual makes social progress possible.

The second division of Part I considers the origin and the function of the educational aim, which can be found only in experience, since this aim is chiefly a statement of social progress already made.

Part II takes up the discussion of the social process, since it is here that the educational aim has its alpha and its omega. The nature of the social process may be shown either from the standpoint of the individual or from that of society. All the activities of men are included in the social process, and most of them are organized in the form of institutions, which leads the author to consider next some of the more important of these, such as the family, the church, the state, and the school.

Part III deals with the powers and the capacities of the individual, the mode of his development, the curriculum, which furnishes the leading stimuli for this development, and lastly with the social organization of the school.

The two necessary factors in development are stimulus and response. Environment furnishes the stimulus, the response being conditioned by the inherited tendencies of the individual in the form of instincts and impulses. Since the school is the chief agency for presenting stimuli, the study would not be complete without some analysis of its organization. The intellectual organization of the school is represented by the curriculum, which has originated in society and represents the cultural values as defined by society. The evolution of the curriculum has been conditioned by tradition, educators, teachers, and by society itself.

Upon the whole the author seems to be discussing the principles underlying the social aspect of education, using the method and the authority of philosophy to discover and to establish them. It is only by keeping constantly in mind the author's own interpretation of the problem and scope of philosophy that the writer was able to harmonize the discussion all the way through with the title of the book. This philosophical trend of the author may also incidentally account for the inclusion of a discussion of the aim of education. A scientific treatment of the principles of education would not directly comprehend a discussion of the aim, without apology, since the principles of the educative process are not in any special way dependent upon the aim. Notwithstanding, however, these slightly confusing characteristics, together with the somewhat disappointing absence of many specific examples of the general principles discussed, the treatise represents a marked degree of originality and constitutes a valuable and illuminating addition to the literature in the field of education.

ROBERT A. CUMMINS

UNIVERSITY OF PUGET SOUND
TACOMA, WASHINGTON

Elements of Physics. By EDWIN H. HALL. New York: Henry Holt & Co., 1913. Pp. viii+576; 351 illustrations; 6 portraits. \$1.25.

This book is an outgrowth of the third edition of Hall and Bergen's text in physics and shows many important changes and improvements over the original. There is more matter than can be thoroughly mastered in one year by the average secondary-school pupil. This is a good feature as it gives the teacher considerable latitude in the choice of topics. The separation of subject and laboratory matter is a wise provision, thus not interrupting the continuity of the reading. There are but few illustrative or lecture experiments, leaving more room for subject-matter. Throughout the book are scattered problems and exercises, which will help the reader in fixing the laws and principles already studied; the chapter on Molecular Attraction has been lengthened to twenty pages; the treatment of heat engines has also been improved by the addition of many important and up-to-date discussions; the subject of optics, likewise, has been greatly enhanced by the insertions of several interesting topics, and the discussion of electro-magnetism has been materially improved. The book is conspicuously free from those mathematical expres-

sions which frighten the beginner of physics. It is a good book and merits an extensive adoption by schools.

There are fifty well-selected laboratory exercises at the back of the book, and a complete index of eight pages. The book is well made mechanically, the type is clear and large, the presswork admirable.

Bennett's Bookkeeping and Accounting Exercises. By R. J. BENNETT.

New York, Cincinnati, and Chicago: American Book Co., 1913. Cloth, 12mo; Part I, 96 pages, \$0.40; Part II, 112 pages, \$0.45.

The first book consists of 39 exercises and 2 explanatory chapters. Ten of the exercises are devoted to the journalization of such accounts as Merchandise, Cash, Bills Receivable, Bills Payable, Expense, Property, Interest, Discount, Mortgages, Loss and Gain, Proprietor, Shipments, Consignments, Notes, Drafts and Stocks. These chapters employ a variety of expression and present within a brief space the important points under each topic. Nine chapters present short sets to be worked, one in which ledger only is used, one in which card ledger is employed, one in which there is a loose-leaf system, one in which student must rule all the papers himself, one in which single-entry books must be changed to double, one involving partnership, and one using special column books. Four chapters ask general review questions. These seem to lack the originality and character that is found in other parts of the book, but in the main they are fundamental. Four chapters discuss statements and give exercises on them. The author compares various kinds of statements. Two important chapters discuss the avoidance and detection of errors. Here the author gives the students valuable suggestions. Three chapters are devoted to the adjustment of accounts between firms and between individuals in the same firm.

The author states in his preface that the book is intended as a supplement to the ordinary textbook and as a test of the thinking ability of the students. He succeeds remarkably well. The book as a whole stimulates thought, presents old material in a new way, collects and summarizes information upon the various topics, and gives the atmosphere of the real business world.

Part II contains 21 exercises designed for advanced high-school or college students. Six chapters treat such topics of corporation accounting as the opening and closing of corporation books, changing firms to corporations, incorporation of going concerns, amalgamation of corporations, and questions on corporations. Two chapters discuss statements and reports. Two give review questions. There is one complete short set to be worked. The titles of the remaining chapters are Errors and Trial Balances, Branch Store Accounts, Consolidation of Business Firms, Stock Ledgers, Self-Balancing Ledgers, Designing Columnar Books, Insolvency and Reorganization, Financial Companies, Auditing and Investigations, and General Problems.

The general merit mentioned in connection with the first book is also true of this.

Business Arithmetic for Secondary Schools. By ERNEST L. THURSTON. New York: Macmillan, 1913. Pp. 431. \$1.00.

The text is divided into 47 chapters and treats the topics ordinarily found in these texts, such as Fundamental Processes; Fractions, Aliquot Parts, and Billing, Denominate Numbers, Percentage and Its Applications, Interest and Banking, Dividends and Investments, Proportion, and Partnership. In addition to these customary topics the author also discusses such subjects as the Algebraic Equation, Involution, Evolution, the Thermometer, Composite Units, Graphs, Co-ordinates, the Lever, and Formulae.

Before criticizing this text it may be well to say a word or two about the content of a course in business arithmetic. Vocational mathematics in high schools seems to be branching into two distinct channels. First there is the arithmetic necessary for the boy or girl who intends to enter an office, and second, there is the technical mathematics necessary for the boy who intends to enter the shop. The aim of the two courses must be substantially different. The office man must be able to handle a mass of figures accurately and speedily. The mechanic must be able to manipulate formulae and to apply the mathematics of his special trade. The textbooks for these two courses should be radically different, and any book which tries to straddle both courses is doomed to failure.

Turning to the text we find the author has reduced the drill work to a minimum and introduced mathematics for the mechanic. In his pages on fractions we find such fractions as $\frac{1}{3}$, $\frac{1}{6}$, $\frac{1}{4}$, $\frac{1}{10}$, $\frac{1}{7}$, and $\frac{1}{11}$, and wonder why the author does not confine himself to fractions found in real business. In the preface the author informs us that, "Much thought has been given to problem work, and as one result considerable variety will be noticed in form of statement."

All of the criticisms, which we have made, relate to the author's plan and not to the treatment accorded each subject. He deserves credit for presenting the different topics in such a clear, concise style that the text should be valuable as a reference book for business men. It is in fact a reference, not a textbook.

The cover is too light for the book.

GEORGE A. BEERS

LAKE HIGH SCHOOL

Essentials of Physics. By GEORGE A. HILL. Boston: Ginn & Co., 1912. Pp. viii+344, illustrated. Price, cloth, \$1.10.

This is a unique and practical text. The subject-matter is presented in a manner not often attempted. The author through his long experience as a physics teacher has arrived at the conclusion that the best way to present the subject to secondary-school pupils is by the question and answer method. Therefore, this text is filled from cover to cover with questions, hundreds of

them. First come answered questions, in which just enough of the theory is given for the pupil to grasp the idea under consideration, these being followed by questions for the pupil to answer, and problems for him to solve. The questions are arranged in a careful and logical sequence. Most of the illustrations are aptly chosen and well executed. The treatment of the subject is clear and to the point. There is nothing in the book to omit, the topics being well chosen.

The mechanical work is perfect, presswork excellent, and the kind of type and its arrangement well selected. It is a book that will appeal to progressive teachers.

CHARLES H. SMITH

HYDE PARK HIGH SCHOOL
CHICAGO

School Organization and the Individual Child. By WILLIAM H. HOLMES. Worcester, Mass.: The Davis Press, 1912. Pp. 408.

In the words of the author, this book "undertakes the task of presenting in a somewhat detailed manner the various plans that have been evolved to make school organization fit the needs of the boys and girls, both normal and abnormal, that are enrolled as pupils in the public schools." To this purpose the author consistently adheres by giving few opinions or final conclusions of his own. Part I deals principally with problems of classifications. After a short historical account of class instruction and a discussion of the advantages and disadvantages of yearly promotions, the following plans are described: the "St. Louis Plan," the "Elizabeth Plan," the "Santa Barbara Concentric Plan," the "Cambridge Plan," the "Le Mars Plan," the "Portland Plan," the "Group System," the "North Denver Plan," the "Charlottenberg Plan," and the "Mannheim Plan." The advantages and disadvantages of each are enumerated. A general discussion of the relative advantages of class and individual instruction is followed by an account of the plans used at Pueblo, Newton, and Batavia and by suggestions as to how to give individual instruction and the need and means of training normal students for such teaching. Ungraded classes, gifted pupils, departmental teaching, manu-mental schools, classes for stammerers, and finally the Montessori methods are described.

Part II treats chiefly of schools and classes for defective children and an account of such schools in many countries and cities is given. In this connection the Binet tests are described; also the after care of defective children.

In the appendix are to be found details as to regulations and programs of special schools in various cities, tests, record sheets, and finally a bibliography. The book contains an index but no table of contents. Anyone desiring to post himself as to what has been and is being done for special types of children without going over a large amount of scattered literature will find the book very useful.

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BOOKS RECEIVED

ENGLISH

Calhoun, Dorothy Donnell. *When Great Folks Were Little Folks*. New York: Macmillan, 1913. Pp. xi+174. \$0.40.

Faculty, Columbia University. *Lectures on Literature*. Columbia University Press, 1911. Pp. viii+404.

Heydrick, Benjamin A. *Types of the Short Stories*. Chicago: Scott, Foresman & Co., 1913. Pp. 305. \$0.30.

How, Will David. *Selections from William Hazlett*. Boston: Ginn & Co., 1913. Pp. lxxi+308. \$0.20.

Lewis, Homer P. and Elizabeth. *Lippincott's Fourth Reader*. Philadelphia: J. B. Lippincott Co., 1913. Pp. 336.

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Lyon, Leverett S. *Elements of Debating*. Chicago: The University of Chicago Press, 1913. Pp. ix+136. \$1.00.

McConaughy, James L. *The School Drama*. Columbia University, 1913. Pp. 116. \$1.00.

Payne, Leonidas Warren. *Southern Literary Readings*. Chicago: Rand McNally & Co., 1913. Pp. 485. \$0.75.

Sawin, Rosa L., and Palmer, Frank H. (collected and edited by). "Right-at-Hand Stories." Boston: Palmer Co. Pp. 210.

Watkins, Dwight Everett. *Public Speaking for High Schools*. New York: American Book Co., 1912-13. Pp. 183.

HISTORY

Browning, Oscar. *A General History of the World*. New York: Longmans, Green & Co., 1913. Pp. x+797. \$1.50.

Fling, Fred Morrow, and Helene Dresser. *Source Problems on the French Revolution*. New York: Harper & Bro., 1913. Pp. xiii+335.

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Johns, C. H. W. *Ancient Babylonia*. Cambridge University Press, 1913. Pp. 148. \$0.40.

Mawer, Allen. *The Vikings*. Cambridge University Press, 1913. Pp. 150. \$0.40 net.

Siglo, En El. *La Conquesta de Chile*. Santiago de Chile: Imp., Litografia y Enguadernacion "la Ilustracion," Moneda 855, 1909. Pp. 243.

NOTE.—In the review of *American Poems* by Walter C. Bronson, printed in the November, 1913, number of the *School Review*, the price is erroneously quoted. The net price is \$1.50 and postpaid, \$1.68.

Stephenson, Nathaniel Wright. *An American History*. Boston: Ginn & Co., 1913. Pp. xi+604.

MISCELLANEOUS

Baldwin and Newton. *Fifty Standard Hymns*. Pp. 32. \$0.10.

Bigelow, Maurice A. and Anna N. *Introduction to Biology*. New York: Macmillan, 1913. Pp. ix+424. \$1.10.

Bogardus, E. S. *An Introduction to the Social Sciences*. California: Ralston Press. Pp. 204.

Byrnes, James C., Richman, Julia, and Roberts, John S. *Pupils' Arithmetic*. (Book Five.) New York: Macmillan, 1913. Pp. viii+258. \$0.40.

Hoadley, George A. *Essentials of Physics*. New York: American Book Co., 1913. Pp. 536. \$1.25.

Stackpole, Markham W., and Ashton, Joseph N. *Hymns for Schools and Colleges*. Boston: Ginn & Co., 1913. Pp. xxv+263. \$1.25.

Stamper, Alva Walker. *A Textbook on the Teaching of Arithmetic*. New York: American Book Co., 1913. Pp. 284.

EDUCATION

Altmaier, Carl L. *Commercial Correspondence and Postal Information*. New York: Macmillan, 1913. Pp. xiv+252, \$0.70.

Buckingham, B. R. *Spelling Ability*. Columbia University Press, 1913. Pp. viii+116. \$1.25.

Chapin, F. Stuart. *Introduction to the Study of Social Evolution*. New York: Century Co., 1913. Pp. xxii+306. \$2.00.

Encina, Francisco A. *Nuestra Inferioridad Económica, sus Causas, sus Consecuencias*. Santiago de Chile: Imprenta Universitaria, Bandera 130, 1912. Pp. 364.

Finkelstein, I. E. *The Marking System in Theory and Practice*. Baltimore, Warwick & York, 1913. Pp. 88.

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Garber, John Palmer. *Current Activities and Influences in Education*. Philadelphia: J. B. Lippincott & Co., 1913. Pp. 370.

Hering, Edward. *Memory*. Chicago: Open Court Publishing Co., 1913. Pp. 70. \$1.00.

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Nichols, Frederick G., and Rogers, Ralph E. *A Short Course in Commercial Law.* New York: American Book Co., 1913. Pp. iv+300. \$0.80.
 Patzer, Otto. *Un Mariage D'Amour.* Boston: Ginn & Co., 1913. Pp. vii+63. \$0.25.

CURRENT EDUCATIONAL LITERATURE IN THE PERIODICALS¹

IRENE WARREN

Librarian, School of Education, the University of Chicago

Abbott, Allan. A high-school course in periodical literature. *English J.* 2:422-27. (S. '13.)
 Addresses by citizens to school boys. *El. School T.* 14:117-31. (N. '13.)
 Alton, Margaret. The mental value of the study of English grammar. *Educa.* 34:78-80. (O. '13.)
 Anderson, L. F. The manual labor school movement. *Educa. R.* 46:369-86. (N. '13.)
 Babcock, E. B. The use of phonetics in teaching elementary French. *School R.* 21:608-17. (N. '13.)
 Bawden, William T. Agricultural education thru home projects: the Massachusetts plan. *Voca. Educa.* 3:86-105. (N. '13.)
 Bennett, Charles A. Newcomb school of art: its relation to art industries. *Voca. Educa.* 3:119-25. (N. '13.)
 Blaine, Anita McCormick. The ideals which led to the founding of the School of Education. *El. School T.* 14:73-81. (O. '13.)
 Bowder, Witt. Education for the industrial advance of the wage-earner. *Educa.* 34:69-77. (O. '13.)
 Bristol, George P. High school graduation and college entrance. *Educa. R.* 46:325-29. (N. '13.)
 Brooks, E. C. Seven, eight, and nine years in the elementary school. *El. School T.* 14:82-92. (O. '13.)
 Coover, J. Edgar. The Union High School questionnaires. *Educa.* 34:81-94. (O. '13.)
 Corbin, John. The struggle for college democracy. *Cent.* 87:80-87. (N. '13.)
 Crawshaw, F. D. The relation between and the control of manual arts and vocational education. *El. School T.* 14:107-116. (N. '13.)

¹ Abbreviations.—*Atlan.*, Atlantic Monthly; *Cent.*, Century; *Colum.*, Univ. Q., Columbia University Quarterly; *Educa.*, Education; *Educa. Bi-mo.*, Educational Bi-monthly; *Educa. R.*, Educational Review; *El. School T.*, Elementary School Teacher; *English J.*, English Journal; *J. of Educa. Psychol.*, Journal of Educational Psychology; *Lit. D.*, Literary Digest; *Pop. Sci. Mo.*, Popular Science Monthly; *Psychol. Clinic*, Psychological Clinic; *R. of Rs.*, Review of Reviews; *School R.*, School Review; *Voca. Educa.*, Vocational Education.

Curtis, Henry S. The rural church as a social center. *Educa.* 34:111-18. (O. '13.)

Dingee, Gertrude P. The value of Latin in the high school. *Educa.* Bi-mo. 8:23-27. (O. '13.)

Earle, Samuel Chandler. The organization of instruction in composition. *English J.* 2:477-87. (O. '13.)

Egbert, James C. Extension teaching at Columbia. *Colum. Univ. Q.* 15: 366-71. (S. '13.)

Flexner, Abraham. The German side of medical education. *Atlan.* 112: 654-62. (N. '13.)

Gaston, George H. A bibliography for the study of the history and government of Chicago. *Educa.* Bi-mo. 8:81-87. (O. '13.)

Glenny, Mrs. Bryant B. How may a community make a study of its schools as opportunities for vocational education? *Voca. Educa.* 3:79-85. (N. '13.)

Greenwood, James M. How New York City administers its schools. *Educa.* R. 46:217-28. (O. '13.)

Groszmann, Maximilian P. E. A tentative classification of exceptional children. *Child (London)* 4:33-39. (O. '13.)

Grupe, Mary A. How the problems of the rural schools are being met. *Pop. Sci. Mo.* 83:484-90. (N. '13.)

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Hooper, Cyrus L. The Cornman and Wallin spelling tests. *Educa.* Bi-mo. 8:28-41. (O. '13.)

Hosic, James Fleming. The advance movement of teachers of English. *Educa.* 34:99-103. (O. '13.)

—. Co-operation of all departments in the teaching of English composition. *School R.* 21:598-607. (N. '13.)

Howorth, Ira W. The apportionment of school funds. *Educa.* R. 46: 273-84. (O. '13.)

Hughes, Helen Sard. "Literature for children": a protest. *English J.* 494-99. (O. '13.)

Inglis, Alexander. The distribution of pupils in the public high schools. *Educa.* R. 46:344-50. (N. '13.)

Jennings, H. M., and Hallock, A. L. Binet-Simon tests at the George Junior Republic. *J. of Educa. Psychol.* 4:471-75. (O. '13.)

Jones, Adam Leroy. Some new methods of admission to college. *Educa.* R. 46:351-60. (N. '13.)

Klapper, Paul. A judgment of the New York City schools. *Educa.* R. 46: 335-43. (N. '13.)

Lewis, J. C., Hoke, K. J., Welles, J. B., and Wilson, G. M. Accuracy of pupil reporting. *Psychol. Clinic* 7:135-41. (O. '13.)

Long, Percy W. Grades that explain themselves. *English J.* 2:488-93. (O. '13.)

(The) lost years of the schoolboy. *Lit. D.* 47:681. (18 O. '13.)

McKittrick, May. The adaptation of the work in English to the actual needs and interests of the pupils. *English J.* 2:405-16. (S. '13.)

Maclear, Martha. The Froebel fetish. *Educa. R.* 46:330-34. (N. '13.)

McManis, John T. Chicago schools and child welfare. *Educa. Bi-mo.* 8: 42-50. (O. '13.)

Mardorf, Mae F. Contributions to nature-study from the Chicago schools. *Educa. Bi-mo.* 8:78-80. (O. '13.)

Miner, James Burt. The scientific study of child development. *Pop. Sci. Mo.* 83:506-13. (N. '13.)

Molter, Harold. Practical suggestions for the teaching of sex hygiene. *Educa.* 34:95-98. (O. '13.)

(The) Montessori schools in Italy—an account based on personal visits by two Americans. *Lit. D.* 47:637-38. (11 O. '13.)

(The) need of more romantic mathematics. *Current Opinion* 55:260. (O. '13.)

Otis, Margaret. The Binet tests applied to delinquent girls. *Psychol. Clinic* 7:127-34. (O. '13.)

“Peopleizing” the museums. *Lit. D.* 47:757. (25 O. '13.)

Roberts, William M. Classes for apprentices in the Chicago Public Schools. *Educa. Bi-mo.* 8:16-22. (O. '13.)

Rounds, C. R., and Kingsbury, H. B. Do too many students fail? *School R.* 21:585-97. (N. '13.)

Schinz, Albert. Difference between the work of the high school, college and graduate school. *Educa. R.* 46:237-51. (O. '13.)

Schroeder, H. H. A real problem for educational psychology. *J. of Educa. Psychol.* 4:465-70. (O. '13.)

Sex education as its friends and its foes view it. *Current Opinion* 55:261-62. (O. '13.)

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Sykes, Marion. Failures in the high school. *Educa. Bi-mo.* 8:8-15. (O. '13.)

Venable, Francis P. A question of morals. *Educa. R.* 46:361-68. (N. '13.)

Wells, Dora. An experiment in applied household science. *Educa. Bi-mo.* 8:1-7. (O. '13.)

Winter, John G. Greek and Latin in the schools of Belgium. *School R.* 21:618-26. (N. '13.)

Woolley, Helen T. Facts about the working children of Cincinnati, and their bearing upon educational problems. I. *El. School T.* 14:59-72. (O. '13.) II. 14:132-39. (N. '13.)

Young, Karl. High-school courses in the history of English literature. *English J.* 2:500-504. (O. '13.)

